



# ETHANAC AND BARNETT DEVELOPMENT PROJECT

REVISED FINAL INITIAL STUDY/  
MITIGATED NEGATIVE DECLARATION

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June 2023

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- M Noise Study
- N Vehicle Miles Travelled (VMT) Analysis
- O Traffic Impact Analysis
- P Mitigation Monitoring and Reporting Program (MMRP)



## **Chapter 2. Public Draft Initial Study Mitigated Negative Declaration**

### 1 INTRODUCTION

Changes made to the Public Draft Mitigated Negative Declaration are identified here in ~~strikeout~~ text to indicate deletions and in **red bold underlined** text to signify additions.

#### 1.1 PURPOSE OF THE INITIAL STUDY

This Initial Study has been prepared in accordance with the following:

- California Environmental Quality Act (CEQA) of 1970 (Public Resources Code Sections 21000 et seq.); and
- California Code of Regulations, Title 14, Division 6, Chapter 3 (State CEQA Guidelines, Sections 15000 et seq.).

Pursuant to CEQA, this Initial Study has been prepared to analyze the potential for significant impacts on the environment resulting from implementation of the proposed Project. As required by State CEQA Guidelines Section 15063, this Initial Study is a preliminary analysis prepared by the Lead Agency, the City of Menifee, in consultation with other jurisdictional agencies, to determine if a Mitigated Negative Declaration (MND) or an Environmental Impact Report (EIR) is required for the project.

This Initial Study informs City of Menifee decision-makers, affected agencies, and the public of potentially significant environmental impacts associated with the implementation of the Project. A “significant effect” or “significant impact” on the environment means *“a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project”* (Guidelines §15382). As such, the MND’s intent is to adhere to the following CEQA principles:

- Provide meaningful early evaluation of site planning constraints, service and infrastructure requirements, and other local and regional environmental considerations. (Pub. Res. Code §21003.1)
- Encourage the applicant to incorporate environmental considerations into project conceptualization, design, and planning at the earliest feasible time. (State CEQA Guidelines §15004[b][3])
- Specify mitigation measures for reasonably foreseeable significant environmental effects and commit Menifee and the applicant to future measures containing performance standards to ensure their adequacy when detailed development plans and applications are submitted. (State CEQA Guidelines §15126.4)

#### **Existing Plans, Programs, or Policies (PPPs)**

Throughout the impact analysis in this Initial Study, reference is made to requirements that are applied to all development on the basis of federal, state, or local law, and Existing Plans, Programs, or Policies currently in place which effectively reduce environmental impacts. Existing Plans, Programs, or Policies are collectively identified in this document as PPPs. Where applicable, PPPs



are listed to show their effect in reducing potential environmental impacts. Where the application of these measures does not reduce an impact to below a level of significance, a project-specific mitigation measure is introduced.

## 1.2 DOCUMENT ORGANIZATION

This IS/MND includes the following sections:

### **CHAPTER 1: PUBLIC DRAFT INITIAL STUDY MITIGATED NEGATIVE DECLARATION**

#### **Section 1.0 Introduction**

Provides information about CEQA and its requirements for environmental review and explains that an Initial Study/MND was prepared by the City of Menifee to evaluate the proposed Project's potential to impact the physical environment.

#### **Section 2.0 Project Setting**

Provides information about the proposed Project's location.

#### **Section 3.0 Project Description**

Includes a description of the proposed Project's physical features and construction and operational characteristics.

#### **Section 4.0 Discretionary Approvals**

Includes a list of the discretionary approvals that would be required by the proposed Project.

#### **Section 5.0 Environmental Checklist**

Includes the Environmental Checklist and evaluates the proposed Project's potential to result in significant adverse effects to the physical environment.

#### **Section 6.0 Document Preparers and Contributors**

Includes a list of the persons that prepared this IS/MND.

### **CHAPTER 2: RESPONSE TO COMMENTS**

### **CHAPTER 3: ERRATA**



## PROJECT SETTING

### 1.3 PROJECT LOCATION

The Project site is located in the northern portion of the City of Menifee within the County of Riverside. The site is proposed on APNs 331-060-036 and 331-060-021, which includes 13.89 acres south of Ethanac Road and west of Barnett Road. Regional access to the Project site is provided by Interstate 215 (I-215) off the Ethanac Road exit. The Project site and surrounding area is pictured in Figure 2-1, *Regional Location*. Local access is available from Ethanac Road and Barnett Road as shown in Figure 2-2, *Local Vicinity*. An aerial view is shown in Figure 2-3, *Aerial View*.

### 1.4 EXISTING PROJECT SITE

The Project site is vacant and undeveloped. The site is an irregular shape and consists of low vegetation, including natural grasses and weeds. The site is relatively flat throughout. A drainage channel runs along the western boundary of the site, with an inlet structure located just south of Ethanac Road. Figure 2-4, *Site Photos* show the existing conditions.

### 1.5 EXISTING GENERAL PLAN AND ZONING DESIGNATIONS

The Project site has a land use designation of Economic Development Corridor (EDC) and is zoned Economic Development Corridor – Northern Gateway (EDC-NG). Areas designated as EDC provide for development of primarily nonresidential uses, with residential uses provided as a supporting land use. The EDC-NG area is envisioned as an industrial park area with more intensive industrial uses (less office) than planned for other EDC areas. The area provides a buffer between surrounding commercial/residential uses in Perris to the north and residential uses to the south of McLaughlin.

### 1.6 SURROUNDING LAND USE, GENERAL PLAN AND ZONING DESIGNATIONS

The Project site is located within a predominately developed area. The surrounding land uses are described in Table 2-1.

**Table 2-1: Surrounding Existing Land Uses and Zoning Designations**

	Existing Land Use	General Plan Designation	Zoning Designation
<b>North</b>	Vacant with drainage facilities and a Circle K gas station directly northeast of the site (City of Perris)	Green Valley Specific Plan (GV-SP) – Multi-Family Residential (City of Perris)	Green Valley Specific Plan (GV-SP) – Multi-Family Residential (City of Perris)
<b>West</b>	Vacant (and drainage channel)	Economic Development Corridor – Northern Gateway (EDC-NG)	Economic Development Corridor – Northern Gateway (EDC-NG)
<b>South</b>	Vacant (and drainage channel) SCE Utilities further south	Economic Development Corridor (EDC) (Public Utility Corridor [PUC] further south)	Economic Development Corridor (EDC) (Public Utility Corridor [PUC] further south)



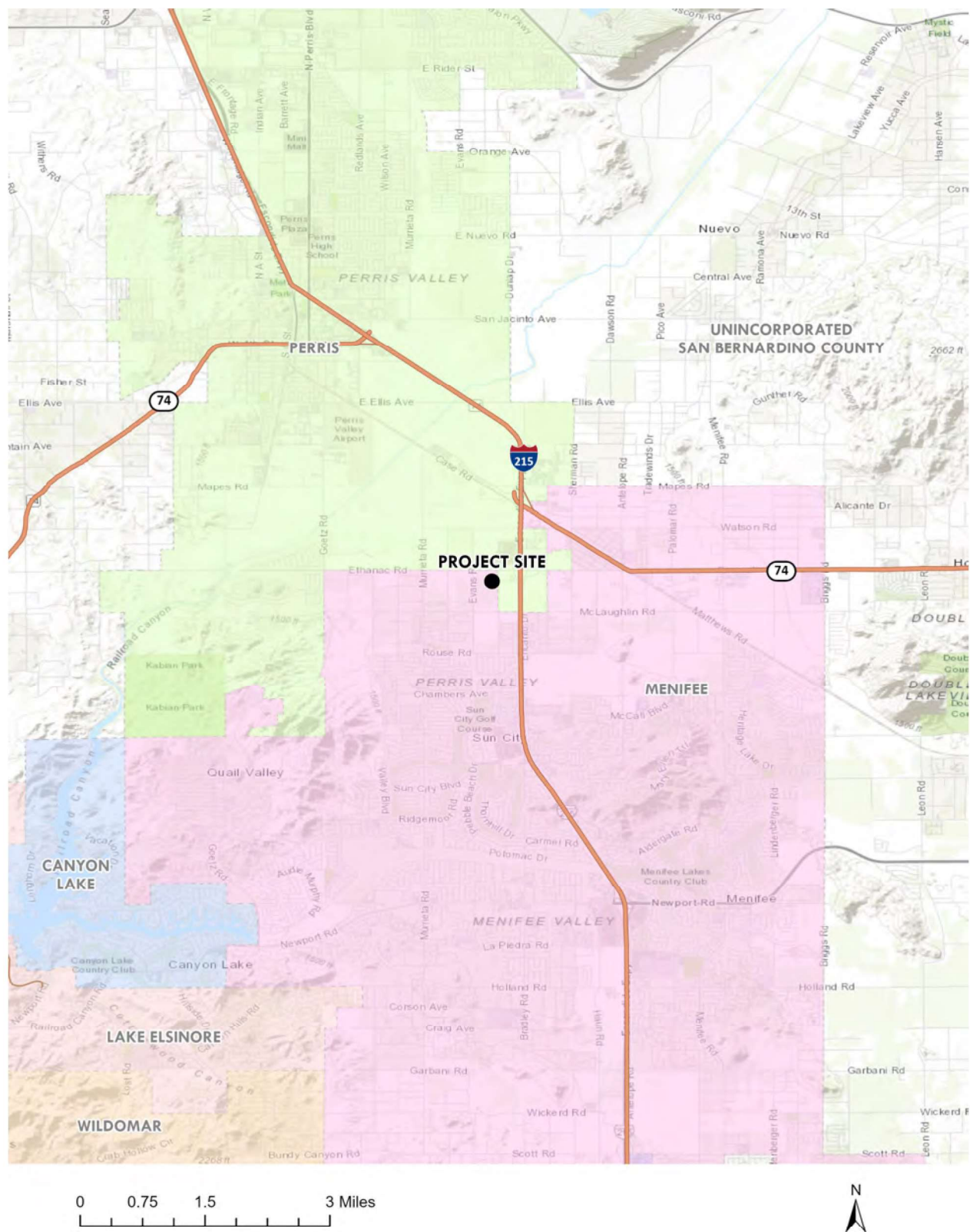
	Existing Land Use	General Plan Designation	Zoning Designation
East	Vacant and 76 gas station (City of Perris)	Commercial Community (CC) (City of Perris)	Commercial Community (CC) (City of Perris)



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# Regional Location

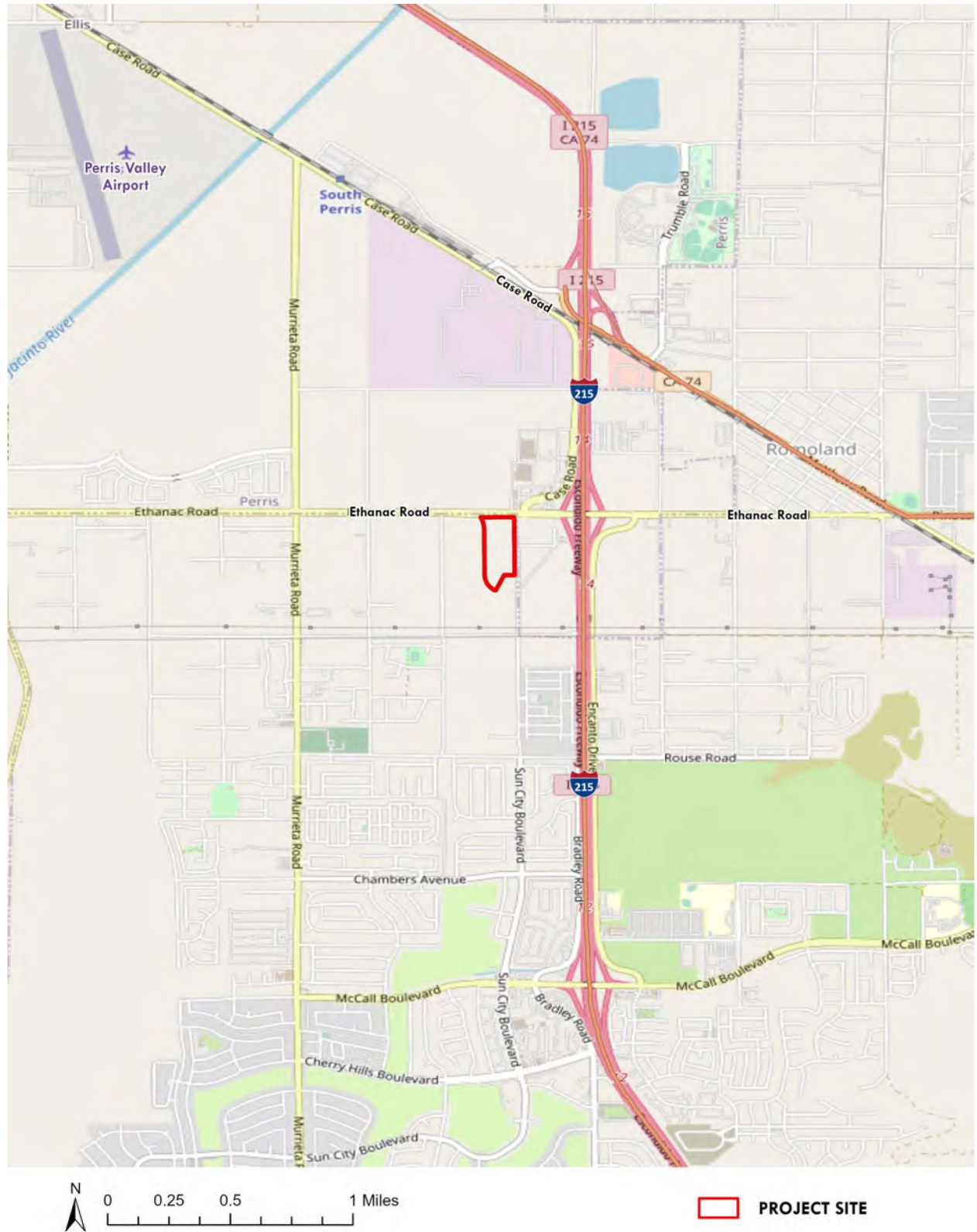




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## Local Vicinity





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## Site Photos



View of the site looking southbound from Ethanac Rd.



View from the east side of the site from Barnett Rd.



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## PROJECT DESCRIPTION

### 1.7 PROJECT OVERVIEW

The Project includes construction of two industrial buildings of about the same size, totaling approximately 251,133 square feet (SF). Building A would be 125,568 SF and Building B would be 125,565 SF. Each building would include 12,496 SF of manufacturing use and 10,000 SF of office use. The Project includes the construction of associated parking, landscaping, and utility improvements to serve the site. The proposed site plan is shown in Figure 3-1, *Conceptual Site Plan*.

The proposed buildings would be a maximum of 42 feet and 6 inches high. The proposed elevations are shown in Figure 3-2, *Elevations*. A total of 32 dock-high doors and 4 grade level doors are proposed. The dock doors would be placed along the southern side of each building. Offices are proposed in the southwest and southeast corners of each building.

The Project site would include an approximately 25-foot setback from Ethanac Road and Barnett Road. A 5-foot landscaped setback would be provided between the proposed parking lot and the flood control channel along the west side of the Project site. The Project site would be setback approximately 85 feet from the western property line and a minimum of 84 feet from the southern property line, adjacent to the vacant property located directly southwest of Ethanac and Barnett Road (APNs 331-060-034 and -035).

#### **Architectural Treatments**

Proposed buildings would be colored concrete tilt-up with sandblast concrete and stone veneer wall treatments. Building colors would be beige with cream and brown accents. Corner entrances of the buildings would include decorative glass facades with metal caps and canopies. The parapets vary from a 38 feet in height to a maximum of 42 feet and six inches, and cutouts with formliner panels would be provided along the long sides of the proposed buildings to create variety in scale and texture.

#### **Access and Circulation**

As shown in Figure 3-1, *Conceptual Site Plan*, four driveways would provide access to the Project site from Barnett Road and Ethanac Road. Three driveways would be provided along Barnett Road, including one shared driveway, and one shared driveway would be provided along Ethanac Road. Drive aisles would extend past the proposed buildings and continue around the west side of the buildings. The shared driveway off Ethanac Road would be 45-feet-wide and the shared driveway off Barnett Road would be 40-feet-wide. The two non-shared driveways off Barnett Road would be 36-feet-wide. Drive aisles would be 30-feet-wide. Truck traffic is anticipated to access the site from Ethanac Road, which is a designated truck route. Additionally, the Project would include frontage street improvements associated with Barnett Road and Ethanac Road.

#### **Parking**

A total of 414 passenger vehicle stalls would be provided for employees and visitors in surface lots to the north and south of the proposed buildings, as well as along the rear perimeter of proposed buildings accessible via proposed driveways. Parking would include clean air/vanpool and future electric vehicle parking spaces, as well as bicycle parking. Parking would meet the requirements of the City's Zoning and Development Code, as outlined in Table 3-1 below.



**Table 2: Parking Summary**

<b>Type of Parking</b>	<b>Required</b>	<b>Quantity</b>
Standard Parking Spaces	338	405
Accessible Parking Spaces	-	9
<b>Total Automobile Parking</b>	<b>338</b>	<b>414</b>

### Landscaping

Landscaping comprises approximately 15 percent (minimum 10 percent required) of the total site area, consistent with the City's Development Code . A 25-foot landscaped buffer would separate the Project site from surrounding roadways and a 5-foot to 10-foot landscaped buffer would be included along the western and southern boundaries of the Project site. Additionally, approximately 10 percent of parking area would be landscaped. Parking lot landscaping would include perimeter planters, planters abutting parking lots and drive aisles, tree planting for parking shade, and a combination of continuous planting strips, planting fingers and parking islands throughout the parking lot. Landscaping would be comprised of drought-tolerant shrubs and ground cover and evergreen and deciduous trees. Figure 3-3, *Landscape Plan*, shows the proposed landscaping for the Project site.

### Fencing and Walls

The two southern entrances on Barnett Road would include 12-foot-high screen walls and security gates setback from the roadway. Another set of screen walls and gates would be constructed on the western sides of the dock door aisles. A 12-foot-high screen wall would enclose the southernmost building truck court as well.

### Infrastructure Improvements

#### *Drainage*

Runoff from the site generally sheet flows in a westerly direction towards an existing flood control master drainage plan (MDP) channel (a.k.a. Romoland Line A). The Project would implement three modular wetland systems (MWS) along the westerly edge of the Project site. The proposed system would be an "off-line system," meaning there would be a low-flow diversion pipe (from the mainline storm drain system) into the proposed MWS, while the excess flows (above the water quality low-flows) would bypass the MWS and outlet to the MDP Romoland Line A channel. Additionally, landscaping would be provided throughout the Project site. Where applicable, runoff from paved area would be directed towards landscape area in an effort to promote incidental infiltration and preserve the infiltration capacity of the Project site.

Stormwater quality treatment control Best Management Practices (BMPs) and storm drain facilities would be implemented as part of the frontage street improvements along Ethanac Road and Barnett Road, and runoff would discharge into the existing MDP Romoland Line A channel. In order to convey the flows from portions of Barnett Road and offsite parcels east of Barnett Road, a connector storm drain pipe would be provided along Barnett Road. The downstream MDP Line A-13 was recently approved by Riverside Flood Control and Water Conservation District (RCFC & WCD) and is anticipated to be constructed by others in 2022. Run-on from parcels northeast and southeast of the Project site would be conveyed via "bypass" storm drain facilities (one near the northerly edge and the other one near the southeasterly edge) towards the existing MDP Romoland Line A Channel.



## 1.8 GENERAL PLAN AND ZONING

The Project is consistent with the General Plan Designation of Economic Development Corridor (EDC) which includes a mixture of residential, commercial, office, industrial, entertainment, educational, and/or recreational uses. In general, areas designated EDC are envisioned to develop primarily as nonresidential uses, with residential uses playing a supporting role. The Project is zoned as Economic Development Corridor – Northern Gateway (EDC-NG).

## 1.9 CONSTRUCTION AND PHASING

Construction activities for the Project would occur over one phase and in the following stages: (1) demolition and removal of existing structures, foundations, asphalt/pavement, utilities, and other subsurface improvements; (2) grading and excavation; (3) site preparation, which includes clearing any remaining infrastructure, utilities, and trenching for the new utilities and services; (4) building construction; and (5) landscape installation, paving, and application of architectural coatings. Demolition is expected to begin September 2023 and construction would last through August 2024 (11-month duration). The Project is expected to open in 2024. Since the Project site is outside of one-fourth mile radius from an occupied residence, construction shall be permitted Monday through Saturday and prohibited on Sunday, or nationally recognized holidays unless approval is obtained from the City Building Official or City Engineer, pursuant to the City's Municipal Code Section 8.01.010.

The Project would require the export and import of approximately 17,776 cubic yards of material, and earthwork would be balanced. Construction activities include removal and re-compaction of soils to a depth of one foot below existing grade.

## 1.10 OPERATIONAL CHARACTERISTICS

The Project would be operated as an industrial two-unit warehouse. Typical operational characteristics include employees and customers traveling to and from the site, delivery of materials and supplies to the site, truck loading and unloading, and manufacturing activities. The Project is anticipated to operate 7 days a week 24 hours a day.

## 1.11 DISCRETIONARY APPROVALS, PERMITS, AND STUDIES

The following discretionary approval, permits, and studies are anticipated to be necessary for implementation of the proposed Project:

- Development Plan (Plot Plan) Approval
- Adoption of this Mitigated Negative Declaration with the determination that the MND has been prepared in compliance with the requirements of CEQA.
- Approvals and permits necessary to execute the proposed Project, including but not limited to, demolition permit, grading permit, building permit, etc.

### Other Agencies

- Encroachment Permit from the Riverside County Flood Control and Water Conservation District



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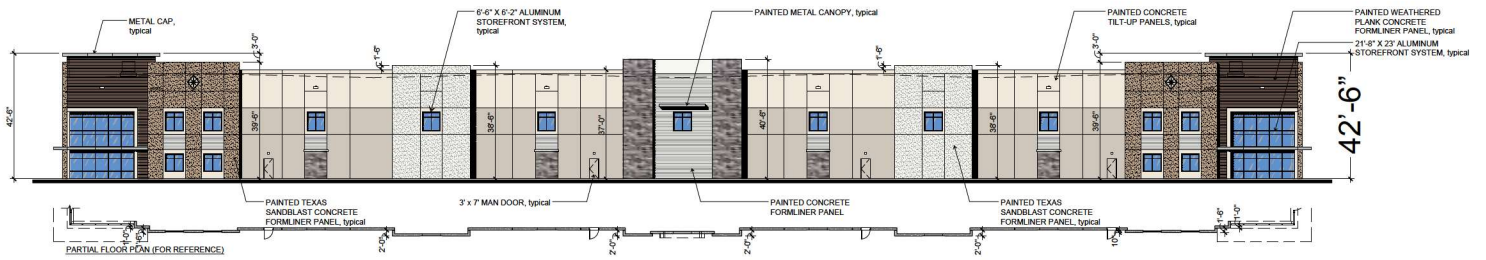




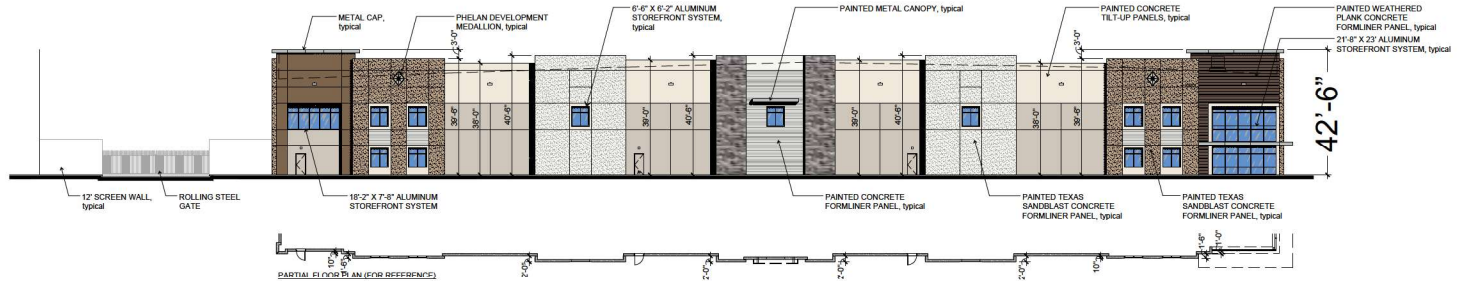
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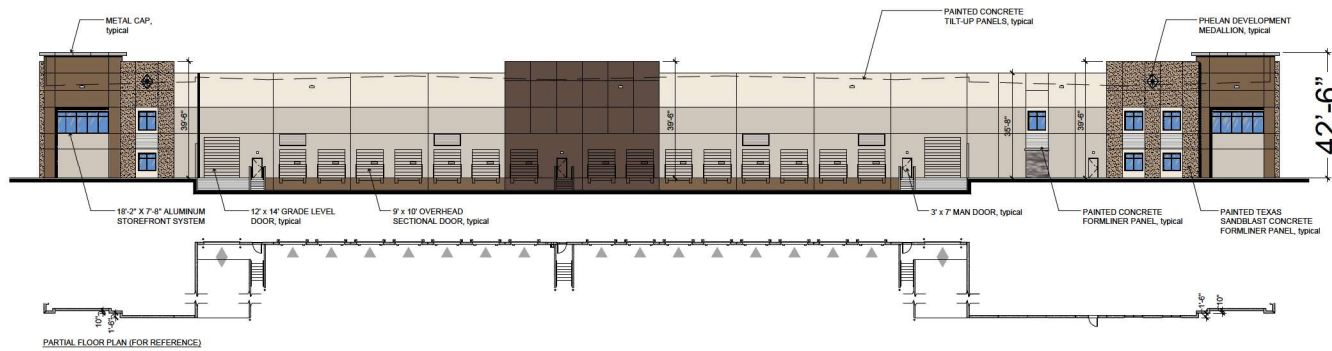
# Elevations



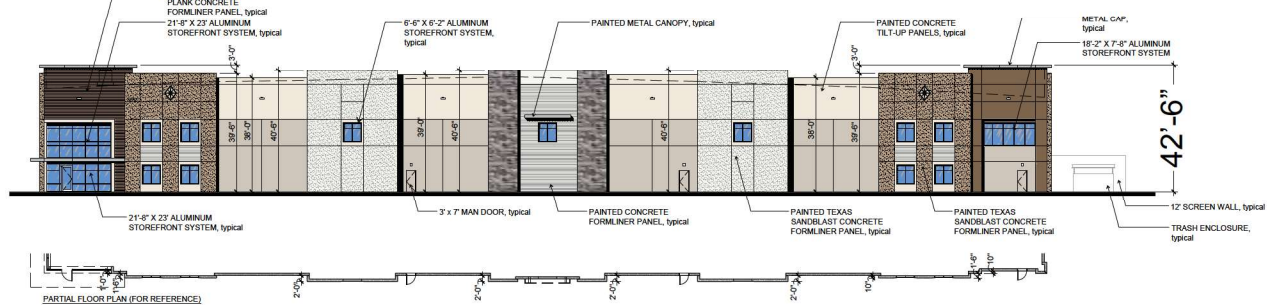
1. NORTH ELEVATION (Building A)



2. EAST ELEVATION (Building A)



3. SOUTH ELEVATION (Building A)



4. WEST ELEVATION (Building A)

	TILT-UP CONCRETE WALL PANEL FIELD COLOR SHERWIN WILLIAMS / HIGH REFLECTIVE WHITE / SW 7757		TILT-UP CONCRETE WALL PANEL ACCENT COLOR SHERWIN WILLIAMS / TEA CHEST / SW 6103
	TILT-UP CONCRETE WALL PANEL FIELD COLOR SHERWIN WILLIAMS / CREAMY / SW 7012		TILT-UP CONCRETE SCREEN WALL PANEL ACCENT COLOR - SHERWIN WILLIAMS / ROOKWOOD DARK BROWN / SW 2808
	TILT-UP CONCRETE WALL PANEL ACCENT COLOR SHERWIN WILLIAMS / WORLDLY GRAY / SW 7043		VITRO - VISTACOOOL PACIFICA GLASS WITH SOLARBAN 60 CLEAR ANODIZED ALUMINUM MULLIONS
	TILT-UP CONCRETE WALL PANEL ACCENT COLOR SHERWIN WILLIAMS / LATTE / SW 6108		TILT-UP CONCRETE WALL PANEL STONE VENEER EL DORADO STONE - STACKED STONE "SILVER LINING"



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### Figure 3-3



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## ENVIRONMENTAL CHECKLIST

This section includes the completed environmental checklist form. The checklist form is used to assist in evaluating the potential environmental impacts of the proposed Project. The checklist form identifies potential project effects as follows: 1) Potentially Significant Impact; 2) Less Than Significant with Mitigation Incorporated; 3) Less Than Significant Impact; and 4) No Impact. Substantiation and clarification for each checklist response is provided in Section 5 (Environmental Evaluation). Included in the discussion for each topic are standard condition/regulations and mitigation measures, if necessary, that are recommended for implementation as part of the proposed Project.

## 1.12 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below (☑) would be potentially affected by this Project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

**Environmental Factors Potentially Affected**

<input type="checkbox"/>	Aesthetics	<input type="checkbox"/>	Agriculture and Forest Resources	<input type="checkbox"/>	Air Quality
<input type="checkbox"/>	Biological Resources	<input type="checkbox"/>	Cultural Resources	<input type="checkbox"/>	Energy
<input type="checkbox"/>	Geology/Soils	<input type="checkbox"/>	Greenhouse Gas Emissions	<input type="checkbox"/>	Hazards and Hazardous Materials
<input type="checkbox"/>	Hydrology/Water Quality	<input type="checkbox"/>	Land Use/Planning	<input type="checkbox"/>	Mineral Resources
<input type="checkbox"/>	Noise	<input type="checkbox"/>	Population/Housing	<input type="checkbox"/>	Public Services
<input type="checkbox"/>	Recreation	<input type="checkbox"/>	Transportation	<input type="checkbox"/>	Tribal Cultural Resources
<input type="checkbox"/>	Utilities/Service Systems	<input type="checkbox"/>	Wildfire	<input type="checkbox"/>	Mandatory Findings of Significance



**DETERMINATION**

(To be completed by the Lead Agency) on the basis of this initial evaluation

<input type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
<input type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature	Date
	City of Meniffee
Printed Name	For

**EVALUATION OF ENVIRONMENTAL IMPACTS**

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than



significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.

- 4) “Negative Declaration: Potentially Significant Unless Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from “Earlier Analysis,” as described in (5) below, may be cross-referenced).
- 5) Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063 (c)(3)(d). In this case, a brief discussion should identify the following:
  - (a) Earlier Analysis Used. Identify and state where they are available for review.
  - (b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
  - (c) Mitigation Measures. For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g. general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.
- 9) The analysis of each issue should identify: (a) the significance criteria or threshold used to evaluate each question; and (b) the mitigation measure identified, if any, to reduce the impact to less than significance.



## ENVIRONMENTAL CHECKLIST QUESTIONS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>1. AESTHETICS.</b> Except as provided in Public Resources Code Section 21099 would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

**Less than Significant Impact.** Scenic vistas consist of expansive, panoramic views of important, unique, or highly valued visual features that are seen from public viewing areas. This definition combines visual quality with information about view exposure to describe the level of interest or concern that viewers may have for the quality of a particular view of visual setting.

There are no officially designated scenic vistas within the City. According to the Menifee General Plan Draft Environmental Impact Report, scenic features within the City include gently sloping alluvial fans, rugged mountains and steep slopes, mountain peaks and ridges, rounded hills with boulder outcrops, farmland and open space (City of Menifee 2013). Within the City, scenic views include long distance views of the San Jacinto Mountains to the northeast and east; the San Bernardino Mountains to the north; the San Gabriel Mountains to the northwest; and the Santa Ana Mountains to the west and southwest. Additionally, the Canyon Lake Reservoir lies next to the west City boundary.

The Project site is within a partially developed area of the City of Menifee. The site is surrounded by vacant land to the east, west, and south and a drainage facility to the north. A large shopping center, Perris Crossings, is located to the northeast across Ethanac Road. Long distance views of the surrounding San Bernardino, San Gabriel and Santa Ana Mountains are available to motorists and



pedestrians along Ethanac Road and Barnett Road, as well as across the undeveloped site. However, there are no officially designated scenic vistas within the vicinity of the Project site.

The Project would be developed in accordance with the City's design guidelines, Municipal Code standards, and General Plan Policies, which regulate building height and intensity. The Project includes two buildings, which would be a maximum of 42 feet and 6 inches high. The Project site would include approximately a 25-foot setback from Ethanac Road and Barnett Road. A 5-foot landscaped setback would be provided between the proposed parking lot and the flood control channel along the west side of the project site. The project site would be setback approximately a 5-foot landscaped setback and 80-foot building setback from the property to the west and a 10-foot setback from the parcel within the southwest corner of the Project site. The buildings' massing, height, and setbacks would limit views directly across the Project site when pedestrians and vehicles are immediately passing the site; however, long distance public views of surrounding mountains would continue to be afforded to pedestrians and drivers traveling east/west along Ethanac Road and north/south along Barnett Road.

Therefore, implementation of the proposed Project would not substantially impact a scenic vista, nor substantially degrade the availability of existing views of the San Bernardino, San Gabriel and Santa Ana Mountains. Therefore, impacts would be less than significant, and no mitigation is required.

**b) Substantially damage scenic resources, including, trees, rock outcroppings, and historic buildings within a state scenic highway?**

**Less than Significant Impact.** There are no officially designated State Scenic Highways in the City of Menifee (City of Menifee 2013). A portion of State Route 74 (SR 74) is considered an "Eligible State Scenic Highway – Not Officially Designated" by the California Department of Transportation (Caltrans 2022). The Project site is located approximately 1.3 miles west of SR 74. The Project would be designed and developed in accordance with the City's Design Guidelines, Municipal Code Standards, and in compliance with General Plan policies. Implementation of the Project would not result in damage to any scenic resources including trees, rock outcroppings, and historic buildings within a State Scenic Highway since there are no designated State Scenic Highways within the City. Therefore, impacts related to scenic resources within a state scenic highway are considered less than significant.

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

**Less than Significant Impact.** The Project site is located within a partially developed area of the City of Menifee, surrounded by vacant land and commercial uses. The proposed Project would construct a new warehouse facility with related improvements that would be consistent with the General Plan and City's Municipal Code. The Project would meet site design requirements including but not limited to setbacks, building heights, parking, and landscaping as shown in Table AES-1 below. The Project's compliance with building code requirements would be verified during the City's plan check and permitting process. Furthermore, as discussed above, long distance public views of surrounding mountains would continue to be afforded to pedestrians and drivers traveling east/west along Ethanac Road and north/south along Barnett Road. As a result, the warehouse would not substantially degrade the existing visual character or quality of public views of the site



and its surroundings and impacts related to scenic quality within the urbanized environment would be less than significant.

**Table AES- 1: Consistency with Development Standards**

Development Feature	EDC-NG Zoning Requirement	Proposed Project Consistency
Minimum Lot Area	15,000 SF	<b>Consistent.</b> The proposed Project site is 604,973 SF.
Maximum FAR	1.0	<b>Consistent.</b> The proposed Project would have a FAR of 0.42.
Building Height	100' max	<b>Consistent.</b> The proposed Project would be 42'6" in height.
Setbacks	Front Yard: 25' min Street Side Yard: 15' min Interior Side Yard: 0' min or N/A Rear Yard: 10' min	<b>Consistent.</b> The Project would be set back 25-feet from Ethanac Road and Barnett Road. A 5-foot landscaped setback would be provided between the proposed parking lot and the flood control channel along the west side of the Project site. The Project would be setback 80 feet from the west property line and a minimum of 84 feet from the southern property line.
Landscaping	10%	<b>Consistent.</b> The Project would include 2.2 acres (15.28% or 92,456 SF) of landscaping.

**d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?**

**Less than Significant Impact.** The Project site is located within a partially developed area of the City of Menifee. Existing sources of light in the vicinity of the Project site includes: street lights, parking lot lighting, building illumination, security lighting, landscape lighting, and lighting from building interiors that pass through windows.

The Mt. Palomar Observatory is located at 35899 Canfield Road, Palomar Mountain, approximately 30 miles southeast of the Project site in San Diego County. The observatory requires dark nighttime sky with minimal amount of lighting glare generated by development to operate. To minimize impacts of lighting on the Mount Palomar Observatory, the City implements Section 6.01 of the Municipal Code to regulate light pollution. Lighting to be installed at the Project site would be designed in conformance with this policy and all applicable standards in the City Municipal Code to minimize light spillage to the night sky.

**Construction.** Although construction activities would occur primarily during daylight hours, construction activities could extend into the evening hours, as permitted by the City's Municipal Code Chapter 9.210.060 (permitted construction activities from 6:30 a.m. to 7:00 p.m., Monday through Saturday except nationally recognized holidays). Lighting required during construction of the Project would be shielded and directed toward work activity areas, in compliance with the City's Municipal Code Chapters 9.210 (Performance Standards) and 6.01 (Dark Sky; Light Pollution) (included as PPP AES-1) that provides for directing lighting away from adjacent uses and intensity of security lighting. In addition, construction may include nighttime security lighting; however, this would be similar to the existing security lighting on the site, adjacent sites, and streetlights. Also, any construction related lighting would be temporary. Therefore, construction of the Project would



not create a new source of substantial light that would adversely affect day or nighttime views in the area, and light impacts associated with construction would be less than significant.

**Operation.** The Project would include the provision of nighttime lighting for security purposes around the building and in the parking areas. Implementation of the Project could contribute additional sources to the overall ambient nighttime lighting conditions. However, all outdoor lighting would be hooded or appropriately angled away from adjacent land uses and would comply with the City's Municipal Code Chapters 9.205 (Lighting Standards) and 6.01 (Dark Sky; Light Pollution) (included as PPP AES-1) which provides for directing lighting away from adjacent uses and intensity of security lighting. Because the Project area is within a partially developed area with various sources of existing nighttime lighting, and because the Project would be required to comply with the City's lighting regulations that would be verified by the City during the plan check and permitting process, any increase in lighting that would be generated by the Project would not adversely affect day or nighttime views in the area.

Reflective light (glare) can be caused by sunlight or artificial light reflecting from finished surfaces such as window glass or other reflective materials. Generally, darker or mirrored glass would have a higher visible light reflectance than clear glass. Buildings constructed of highly reflective materials from which the sun reflects at a low angle can cause adverse glare. However, the Project would not use highly reflective surfaces, or glass sided buildings. Although the building would contain windows, the windows would be comprised of blue reflective glazing, which reduces glare over other transparent surfaces and the windows would be separated by stucco that would limit the potential of glare. As described previously, onsite lighting would be angled down and comply with Chapters 9.205 (Lighting Standards) and 6.01 (Dark Sky; Light Pollution) the City's Municipal Code (included as PPP AES-1), which would avoid the potential of onsite lighting generating offsite glare.

In summary, compliance with Chapter 9.205 (Lighting Standards) and Chapter 6.01 (Dark Sky; Light Pollution) of the City Municipal Code, would ensure the proposed Project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. Impacts would be less than significant, and no mitigation is required.

### **Existing Plans, Programs, or Policies**

**PPP AES-1: Glare.** Pursuant to Chapters 9.210 (Performance Standards) and 6.01 (Dark Sky; Light Pollution) of the City's Municipal Code, no activity shall be permitted which causes light or glare to be transmitted or reflected in such concentrated quantities as to be detrimental or harmful to the use of surrounding properties or streets.

### **Mitigation Measures**

No mitigation measures related to aesthetics are required.

### **Sources**

California Department of Transportation (Caltrans). *California State Scenic Highway System Map*. Accessed June 2022. Available at:

<https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aaca9>

City of Menifee. 2013. Draft Environmental Impact Report. Accessed June 2022. Available at: <https://www.cityofmenifee.us/262/Environmental-Impact-Report>



	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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## 2. AGRICULTURE AND FORESTRY

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

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



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

**Less than Significant Impact.** The Project site is vacant and undeveloped. The California Department of Conservation Farmland Mapping and Monitoring Program identifies the site as Farmland of Local Importance and it is not identified as Prime, Unique, or Farmland of Statewide Importance. Therefore, conversion of such farmland designations would not occur from implementation of the proposed Project. Additionally, the land has a general plan land use of Economic Development Corridor (EDC) and is zoned as Economic Development Corridor – Northern Gateway (EDC-NG) where the land is envisioned as an industrial park area with more intensive industrial uses and no agricultural uses are planned. Therefore, impact would occur.

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

**No Impact.** The Project site is zoned Economic Development Corridor – Northern Gateway (EDC-NG), which does not provide for agricultural uses. In addition, the site is not subject to a Williamson Act contract. Thus, the proposed Project would not result in impacts related to conflict with an existing agricultural zone or Williamson contract, and impacts would not occur.

**c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?**

**No Impact.** The Project site is currently vacant and undeveloped and is within a developing area. No forest land exists on or adjacent to the Project site. The Project site is currently zoned as Economic Development Corridor – Northern Gateway (EDC-NG) and is not zoned for forest land or timberland uses. Thus, the proposed Project would not result in impacts related to a conflict with existing forest land or timberland zoning, and impacts would not occur.

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

**No Impact.** The Project site is currently vacant and undeveloped and is within developing area. No forest land exists on or adjacent to the Project site. Thus, the Project would not result in the loss of forest land or conversion of forest land to a non-forest use, and impacts would not occur.

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

**No Impact.** As described above, the Project site is currently vacant and undeveloped and within a developing area. No forest land exists on or adjacent to the site. Therefore, the implementation of the proposed Project would not involve other changes in the existing environment which would result in the conversion of farmland to a non-agricultural use or the conversion of forest land to a non-forest use. Therefore, no impacts would occur.



**Existing Plans, Programs, or Policies**

There are no impacts reducing Plans, Programs, and Policies related to agriculture and forestry that are applicable to the Project.

**Mitigation Measure**

No mitigation measures related to agriculture and forestry are required.

**Sources**

California Department of Conservation. *California Important Farmland Finder*. Accessed February 2022. Available at: <https://maps.conservation.ca.gov/DLRP/CIFF/>



	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>3. AIR QUALITY.</b> Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The discussion below is based on the Air Quality Impact Analysis (Urban Crossroads 2022a) included as Appendix A and the Health Risk Assessment (Urban Crossroads 2022b).

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

**Less than Significant Impact.** The Project site is located in the South Coast Air Basin, which is under the jurisdictional boundaries of the South Coast Air Quality Management District (SCAQMD). The SCAQMD and Southern California Association of Governments (SCAG) are responsible for preparing the Air Quality Management Plan (AQMP), which addresses federal and state Clean Air Act (CAA) requirements. The AQMP details goals, policies, and programs for improving air quality in the Basin. In preparation of the AQMP, SCAQMD and SCAG use land use designations contained in General Plan documents to forecast, inventory, and allocate regional emissions from land use and development-related sources.

For purposes of analyzing consistency with the AQMP, if a proposed project would have a development density and vehicle trip generation that is substantially greater than what was anticipated in the General Plan, then the proposed project would conflict with the AQMP. On the other hand, if a project's density is consistent with the General Plan, its emissions would be consistent with the assumptions in the AQMP, and the project would not conflict with SCAQMD's attainment plans. In addition, the SCAQMD considers projects consistent with the AQMP if the project would not result in an increase in the frequency or severity of existing air quality violations or cause a new violation.



As detailed below, the proposed Project would not result in exceedance of local or regional significance thresholds. The Project site is designated as Economic Development Corridor (EDC) uses in the City's General Plan for 2035, which allows for a mixture of residential, commercial, office, industrial, entertainment, educational, and/or recreational uses, or other uses. The proposed Project would redevelop the site with a new concrete tilt-up industrial building.

In addition, emissions generated by construction and operation of the Project would not exceed thresholds as described in the analysis below (Table AQ-1, SCAQMD Regional Daily Emissions Thresholds), which are based on the AQMP and are designed to bring the Basin into attainment for the criteria pollutants for which it is in nonattainment. Therefore, because the Project does not exceed any of the thresholds it would not conflict with SCAQMD's goal of bringing the Basin into attainment for all criteria pollutants and, as such, is consistent with the AQMP. As a result, impacts related to conflict with the AQMP from the Project would be less than significant.

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

**Less than Significant Impact.** The South Coast Air Basin (SCAB) is in a non-attainment status for federal ozone standards, federal carbon monoxide standards, and state and federal particulate matter standards. Any development in the SCAB, including the proposed Project, could cumulatively contribute to these pollutant violations. The methodologies from the SCAQMD CEQA Air Quality Handbook are used in evaluating project impacts. SCAQMD has established daily mass thresholds for regional pollutant emissions, which are shown in Table AQ-1. Should construction or operation of the proposed Project exceed these thresholds a significant impact could occur; however, if estimated emissions are less than the thresholds, impacts would be considered less than significant.

**Table AQ- 1: SCAQMD Regional Daily Emissions Thresholds**

Pollutant	Construction (lbs/day)	Operations (lbs/day)
NO <sub>x</sub>	100	55
VOC	75	55
PM <sub>10</sub>	150	150
PM <sub>2.5</sub>	55	55
SO <sub>x</sub>	150	150
CO	550	550
Lead	3	3

Source: Regional Thresholds presented in this table are based on the SCAQMD Air Quality Significance Thresholds, March 2015.

### Construction

Construction activities associated with the proposed Project would generate pollutant emissions from the following construction activities: site preparation, grading, building construction, paving, and architectural coating. The amount of emissions generated on a daily basis would vary, depending on the intensity and types of construction activities occurring. The Project site is anticipated to be balanced in earthwork and construction would occur over approximately 11 months.

SCAQMD Rule 1401 states that a person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any 1 hour that is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States (U.S.) Bureau of Mines. Although the Project



would comply with this regulatory requirement, it should be noted that there is no way to quantify these reductions in CalEEMod.

The SCAQMD adopted Rule 2305, the Warehouse Indirect Source Rule, on May 7, 2021. Owners and operators associated with warehouses 100,000 SF or larger are required to directly reduce nitrogen oxides (NO<sub>x</sub>) and particulate matter emissions, or to otherwise facilitate emission and exposure reductions of these pollutants in nearby communities. Although the Project would comply with this regulatory requirement, it should be noted that there is no way to quantify these reductions in CalEEMod.

It is mandatory for all construction projects to comply with several SCAQMD Rules, including Rule 403 for controlling fugitive dust, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions from construction activities. Rule 403 requirements include, but are not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the proposed Project site, covering all trucks hauling soil with a fabric cover and maintaining a freeboard height of 12-inches, and maintaining effective cover over exposed areas. Compliance with Rule 403 was accounted for in the construction emissions modeling and is included as PPP AQ-1.

In addition, implementation of SCAQMD Rule 1113 that governs the VOC content in architectural coating, paint, thinners, and solvents, was accounted for in the construction emissions modeling, and is included as PPP AQ-2. As shown in Table AQ-2, CalEEMod results show that construction emissions generated by the proposed Project would not exceed SCAQMD regional thresholds. Therefore, construction activities would result in a less than significant impact.

**Table AQ- 2: Overall Construction Emissions Summary**

Activity	Emissions (lbs/day)					
	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Summer						
2023	5.69	48.40	51.20	0.07	8.58	5.09
2024	37.50	37.80	48.70	0.07	4.12	2.34
Winter						
2023	7.76	44.30	86.70	0.11	5.15	2.91
2024	3.58	28.80	32.00	0.05	3.22	1.83
<b>Maximum Daily Emissions</b>	<b>37.50</b>	<b>48.40</b>	<b>86.70</b>	<b>0.11</b>	<b>8.58</b>	<b>5.09</b>
Significance Threshold	75	100	550	150	150	55
<b>Threshold Exceeded?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Notes: NO<sub>x</sub> = nitrogen oxides; CO = carbon monoxide  
PM<sub>10</sub> and PM<sub>2.5</sub> = particulate matter; ROG = reactive organic gases  
SO<sub>x</sub> = sulfur oxides

Source: Appendix A.

## Operation

Implementation of the proposed Project would result in long-term regional emissions of criteria air pollutants and ozone precursors associated with area sources, such as natural gas consumption, landscaping, applications of architectural coatings, and consumer products. However, offroad emissions would generate a majority of the emissions generated from the Project.

Operational emissions associated with the proposed Project were modeled using CalEEMod and are presented in Table AQ-3. As shown, the proposed Project would result in long-term regional



emissions of the criteria pollutants that would be below the SCAQMD's applicable thresholds. Therefore, the Project's operational emissions would not exceed the NAAQS and CAAQS and would not result in a cumulatively considerable net increase of any criteria pollutant impacts. Thus, impacts would be less than significant.

**Table AQ- 3: Summary of Operational Emissions**

Operational Activity	Maximum Daily Regional Emissions (pounds/day)					
	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Summer</b>						
Mobile	1.78	12.54	22.38	0.14	3.26	0.81
Area	7.88	0.09	10.96	0.00	0.01	0.02
On-Site Equipment Source	0.23	0.75	32.89	0.00	0.06	0.05
<b>Project Maximum Daily Emissions</b>	<b>9.89</b>	<b>13.38</b>	<b>66.23</b>	<b>0.14</b>	<b>3.33</b>	<b>0.88</b>
SCAQMD Threshold	55	55	550	150	150	55
<b>Threshold Exceeded?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
<b>Winter</b>						
Mobile	1.70	13.13	18.84	0.13	3.26	0.81
Area	6.09	0.00	0.00	0.00	0.00	0.00
On-Site Equipment Source	0.23	0.75	32.89	0.00	0.06	0.05
<b>Project Maximum Daily Emissions</b>	<b>8.02</b>	<b>13.88</b>	<b>51.73</b>	<b>0.13</b>	<b>3.32</b>	<b>0.86</b>
SCAQMD Threshold	55	55	550	150	150	55
<b>Threshold Exceeded?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: Appendix A

### c) Expose sensitive receptors to substantial pollutant concentrations?

**Less Than Significant Impact.** The SCAQMD recommends the evaluation of localized NO<sub>2</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> construction-related impacts to sensitive receptors in the immediate vicinity of the Project site. Such an evaluation is referred to as a localized significance threshold (LST) analysis. The impacts were analyzed pursuant to the SCAQMD's Final Localized Significance Threshold Methodology. SCAQMD has developed LSTs that represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards, and thus would not cause or contribute to localized air quality impacts. LSTs are developed based on the ambient concentrations of NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> pollutants for each of the 38 source receptor areas (SRAs) in the SCAB. The Project site is located in SRA 24, Perris Valley area .

Sensitive receptors can include uses such as long-term health care facilities, rehabilitation centers, and retirement homes. Residences, schools, playgrounds, childcare centers, and athletic facilities can also be considered sensitive receptors. The nearest land use where an individual could remain for 24 hours to the Project site has been used to determine localized construction and operational air quality impacts for emissions of PM<sub>10</sub> and PM<sub>2.5</sub> (since PM<sub>10</sub> and PM<sub>2.5</sub> thresholds are based on a 24-hour averaging time). The nearest LST sensitive receptor used for evaluation of localized impacts of PM<sub>10</sub> and PM<sub>2.5</sub> to the Project site is the planned DR Horton residential project, approximately 1,092 feet (332 meters) north of the Project site. The nearest commercial/industrial use to the Project site is used to determine construction and operational LST air impacts for emissions of NO<sub>x</sub> and CO



as the averaging periods for these pollutants are shorter (8 hours or less) and it is reasonable to assumed that an individual could be present at these sites for periods of one to 8 hours. The nearest receptor used for evaluation of localized impacts of NO<sub>x</sub> and CO is the Circle K convenience store located at 3150 Case Road, approximately 445 feet (136 meters) northeast of the Project site.

### Construction

The localized thresholds from the mass rate look-up tables in SCAQMD's Final Localized Significance Threshold Methodology document, were developed for use on projects that are less than or equal to 5-acres in size or have a disturbance of less than or equal to 5 acres daily and were used to evaluate LSTs. As shown in Table AQ-4, with implementation of SCAQMD Rules 403 and 1113 (included as PPP AQ-1 and PPP AQ-2), the maximum daily construction emissions from the proposed Project would not exceed the applicable SCAQMD LST thresholds.

**Table AQ- 4: Localized Construction Emission Estimates**

Construction Activity	Maximum Daily Regional Emissions (pounds/day)			
	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
Site Prep				
Summer	47.00	38.00	8.19	5.02
Winter	n/a	n/a	n/a	n/a
Maximum Daily Emissions	<b>47.00</b>	<b>38.00</b>	<b>8.19</b>	<b>5.02</b>
SCAQMD Significance Thresholds	362	4,005	134	58
<b>Threshold Exceeded?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
Grading				
Summer	40.90	32.70	4.63	2.78
Winter	40.90	32.70	4.63	2.78
Maximum Daily Emissions	<b>81.80</b>	<b>65.40</b>	<b>9.26</b>	<b>5.56</b>
SCAQMD Significance Thresholds	380	4,227	138	60
<b>Threshold Exceeded?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: Appendix A

### Operation

#### Localized Significance Analysis

For operational LSTs, on-site mobile, energy, area, and offroad emissions were modeled. As shown in Table AQ-5, operational emissions would not exceed the SCAQMD's LST thresholds for any criteria pollutant at the nearest sensitive receptor. Therefore, the Project would result in a less than significant impact related to localized emissions from operational activities.

**Table AQ- 5: Localized Significance Summary of Operations**

Scenario	Maximum Daily Regional Emissions (pounds/day)			
	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
Summer	2.81	48.11	0.20	0.11
Winter	2.82	37.38	0.19	0.09
Total Project Operational Emissions	<b>2.82</b>	<b>48.11</b>	<b>0.20</b>	<b>0.11</b>
SCAQMD Significance Thresholds	418	4,669	35	16
<b>Threshold Exceeded?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: Appendix A



**Diesel Mobile Source Health Risk Analysis.** A Health Risk Assessment (HRA)<sup>1</sup>, included as Appendix B, was prepared to evaluate the health risk impacts as a result of exposure to diesel particulate matter (DPM) as a result of heavy-duty diesel trucks entering and leaving the site during operation of the proposed industrial uses. DPM has been identified by the California Air Resources Board (ARB) as a carcinogenic substance responsible for nearly 70 percent of the airborne cancer risk in California. The estimated health risk impacts were compared to the health risk significance thresholds recommended by the SCAQMD for use in CEQA assessments. The City of Menifee has not adopted a numerical significance threshold for cancer risk or non-cancer hazards. Therefore, the significance thresholds recommended by the SCAQMD were utilized for this analysis. The relevant significance thresholds are provided below:

- Cancer Risk: ten (10) persons per million population as the maximum acceptable incremental cancer risk due to exposure to toxic air contaminants (TAC)
- Non-cancer Hazard Index: 1.0

The land use with the greatest potential exposure to Project construction-source and operational-source DPM emissions is located at the planned DR Horton residential project, approximately 1,092 feet south of the Project site. Table AQ-6 provides a summary of the HRA modeling of cancer risks and chronic non-cancer hazards resulting from the Project's construction and operational DPM emissions along with the SCAQMD health risk significance. As shown, at the maximally exposed individual receptor, the maximum incremental cancer risk attributable to Project construction-source DPM emissions is estimated at 0.63 in one million, which is less than SCAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. Additionally, all other receptors during construction and operational activity would experience less risk than what is identified for this location. As such, the Project would not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction and operational activity and impacts would be less than significant.

**Table AQ-6: Summary of Construction Cancer and Non-Cancer Risks**

Time Period	Location	Maximum Lifetime Cancer Risks (Risk per Million)	Significance Threshold (Risk per Million)	Exceeds Significance Threshold?
30 Year Exposure	Maximum Exposed Sensitive Receptor	0.63	10	No
Time Period	Location	Maximum Hazard Index	Significance Threshold	Exceeds Significance Threshold?
Annual Average	Maximum Exposed Sensitive Receptor	≤0.01	1.0	No

Source: Appendix B

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

**Less Than Significant Impact.** The proposed Project would not generate other emissions, not described previously. Typical land uses generally associated with odor complaints includes

<sup>1</sup> Note: The Health Risk Assessment modeled the Project using a previous version of the site plan in which the proposed industrial buildings totaled 251,912 SF. Thus, the analysis presented herein is more conservative than the proposed Project's 251,133 SF total.



agricultural uses (livestock and farming), wastewater treatment plants, food processing plants, chemical plants, composting operations, refineries, landfills, dairies, and fiberglass facilities.

The Project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the proposed Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the proposed Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with current solid waste regulations. The proposed Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, the Project would result in less than significant impacts related to odors.

### **Existing Plans, Programs, or Policies**

**PPP AQ-1:** The Project is required to comply with the provisions of South Coast Air Quality Management District (SCAQMD) Rule 403, which includes the following:

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 mph per SCAQMD guidelines in order to limit fugitive dust emissions.
- The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the Project are watered, with complete coverage of disturbed areas, at least 3 times daily during dry weather; preferably in the mid-morning, afternoon, and after work is done for the day.
- The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are reduced to 15 miles per hour or less.

**PPP AQ-2:** The Project is required to comply with the provisions of South Coast Air Quality Management District Rule (SCAQMD) Rule 1113. Only "Low-Volatile Organic Compounds" paints (no more than 50 gram/liter of VOC) and/or High Pressure Low Volume (HPLV) applications shall be used.

**PPP AQ-3:** The Project is required to comply with the provisions of South Coast Air Quality Management District (SCAQMD) Rule 402. The Project shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

### **Mitigation Measures**

No mitigation measures related to air quality are required.

### **Sources**

Urban Crossroads. Air Quality Impact Analysis (Urban Crossroads 2022a) (Appendix A).

Urban Crossroads. Health Risk Assessment (Urban Crossroads 2022b) (Appendix B).



	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>4. BIOLOGICAL RESOURCES.</b> Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The following section is based on the General Biological Assessment completed by Hernandez Environmental Services (HES) in June 2022 (Appendix C). The biological assessment consisted of a literature review and review of aerial photographs and topographic maps of the Project site and surrounding areas. A five-mile radius was used to identify sensitive species with the California Natural Diversity Data Base (CNDDB), the U.S. Fish and Wildlife Service (USFWS) Endangered Species Lists, and the California Native Plant Society (CNPS) rare plant lists to obtain species information for the project area. Additionally, the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) was reviewed for information on known occurrences of sensitive species within Riverside County. HES also conducted a field survey of the Project site on February 4, 2022. The findings of the biological assessment are discussed below.



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

**Less than Significant with Mitigation.** Biological resources on the Project site were evaluated in the Biological Resources Assessment and Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis (Appendix C) to ensure the proposed Project is consistent with the MSHCP and to analyze potential impacts to candidate, sensitive, and special-status species and associated habitat. Additionally, the Biological Resources Assessment included a field survey conducted on February 4, 2022. The Biological Assessment describes the Project site as consisting of disturbed, vacant land dominated by ruderal vegetation.

The Project site is located within the boundaries of the Western Riverside County Multiple Species Conservation Plan (MSHCP). Therefore, the Project is required to demonstrate consistency with the MSHCP. The MSHCP consistency analysis identified that the Project site is not located within a MSHCP Criteria Cell or Cell Group. Further, the Project site is not located within plan-defined areas requiring surveys for criteria area species, narrow endemic species, amphibian species, or mammalian species. However, the site is located within plan-defined areas requiring surveys for burrowing owl (*Athene cunicularia*) (HES 2022).

Focused habitat suitability surveys were conducted on the Project site for the presence of burrowing owl in March and April 2022. The habitat surveys identified approximately 81 suitable burrows on the Project site and within a 150-foot buffer. No burrowing owl were observed on the Project site during the habitat survey. The habitat survey concluded that the site does provide suitable burrows/nesting opportunities for burrowing owl. Therefore, Mitigation Measure BIO-1 is being incorporated into the Project to require a 30-day preconstruction survey prior to the commencement of Project activities.

A records search of a five-mile radius around the Project site was used to identify sensitive species with the California Natural Diversity Data Base (CNDDDB), the U.S. Fish and Wildlife Service (USFWS) Endangered Species Lists, and the California Native Plant Society (CNPS) rare plant lists to obtain species information for the Project area. According to the CNDDDB, a total of 53 sensitive species of plants and 61 sensitive species of animals has the potential to occur on or within the vicinity of the Project site. Of the 53 sensitive plant species, a total of 18 plant species are listed as state and/or federal Threatened, Endangered, or Candidate species. Table BIO-1 below lists these species, their listing status and their presence on site.

**Table BIO- 1: Sensitive Plant Species with Potential to Occur on Project Site**

Species Name	Listing Status	Presence on Project Site
Chaparral sand-verbena ( <i>Abronia villosa</i> var. <i>aurita</i> )	Ranked 1B.1 in the CNPS Rare Plant Inventory	Not Present
Munz's onion ( <i>Allium munzii</i> )	Federally Endangered, state Threatened, and CNPS 1B.1 listed plant species	Not Present



San Diego ambrosia ( <i>Ambrosia pumila</i> )	Federally Endangered and ranked 1B.1 in the CNPS Rare Plant Inventory	Not Present
Rainbow Manzanita ( <i>Arctostaphylos rainbowensis</i> )	Ranked 1B.1 in the CNPS Rare Plant Inventory	Not Present
Jaeger's milk-vetch ( <i>Astragalus pachypus</i> var. <i>jaegeri</i> )	Ranked 1B.1 in the CNPS Rare Plant Inventory	Not Present
San Jacinto Valley crownscale ( <i>Atriplex coronata</i> var. <i>notatior</i> )	Federally listed endangered species and is ranked 1B.1 in the CNPS rare plant inventory	Not Present
Parish's brittlescale ( <i>Atriplex parishii</i> )	Ranked 1B.1 in the CNPS Rare Plant inventory	Not Present
thread-leaved brodiaea ( <i>brodiaea filifolia</i> )	Federally Threatened and state Endangered Species and is ranked 1B.1 in the CNPS Rare Plant Inventory	Not Present
Smooth tarplant ( <i>Centromadia pungens</i> ssp. <i>laevis</i> )	Ranked 1B.1 in the CNPS Rare Plant Inventory	Not Present
Parry's spineflower ( <i>Chorizanthe parryi</i> var. <i>parryi</i> )	Ranked 1B.1 in the CNPS Rare Plant Inventory	Not Present
Slender - horned spineflower ( <i>Dodecahema leptoceras</i> )	Federally and state listed Endangered Species and is ranked 1B.1 in the CNPS Rare Plant Inventory	Not Present
San Diego button-celery ( <i>Eryngium aristulatum</i> var. <i>parishii</i> )	Federally and state listed Endangered Species and is ranked 1B.1 in the CNPS Rare Plant Inventory	Not Present
Campbell's liverwort ( <i>Geothallus tuberosus</i> )	Ranked 1B.1 in the CNPS Rare Plant Inventory	Not Present
Tecate cypress ( <i>Hesperocyparis forbesii</i> )	Ranked 1B.1 in the CNPS Rare Plant Inventory	Not Present
Coulter's goldfields ( <i>Lasthenia glabrata</i> ssp. <i>coulteri</i> )	Ranked 1B.1 in the CNPS Rare Plant Inventory	Not Present
Spreading navarretia ( <i>Navarretia fossalis</i> )	Federally listed Threatened Species and is ranked 1B.1 in the CNPS Rare Plant Inventory	Not Present
California Orcutt grass ( <i>Orcuttia californica</i> )	Federally and state listed Endangered Species and is ranked 1B.1 in the CNPS Rare Plant Inventory	Not Present
Bottle liverwort ( <i>Sphaerocarpos drewiae</i> )	Ranked 1B.1 in the CNPS Rare Plant Inventory	Not Present



The field survey did not identify suitable habitat for any of the above plant species present on the Project site. Therefore, implementation of the Project would have a less than significant impact on sensitive plant species.

Of the 61 sensitive species of animals identified, 14 are listed as state and/or federal Threatened, Endangered, or Candidate. These species, their listing status, and their presence on site are listed in Table BIO-2 below.

**Table BIO- 2: Sensitive Animal Species with Potential to Occur on Project Site**

Species Name	Listing Status	Presence on Project Site
Tricolored blackbird ( <i>Agelaius tricolor</i> )	State listed Threatened Species and listed by the CDFW as a Species of Special Concern	Not Present
Arroyo Toad ( <i>Anaxyrus californicus</i> )	Federally listed Endangered Species and a CDFW Species of Special Concern	Not Present
Burrowing owl ( <i>Athene cunicularia</i> )	CDFW Species of Special Concern	Not Present
Vernal pool fairy shrimp ( <i>Branchinecta lynchi</i> )	Federally listed Threatened Species	Not Present
San Diego fairy shrimp ( <i>Branchinecta sandiegonensis</i> )	Federally listed Endangered Species	Not Present
Swainson's hawk ( <i>Buteo swainsoni</i> )	State listed Threatened Species	Not Present
Western snowy plover ( <i>Charadrius alexandrinus nivosus</i> )	Federally listed Threatened species and a CDFW Species of Special Concern	Not Present
San Bernardino kangaroo rat ( <i>Dipodomys merriami parvus</i> )	Federally listed Endangered Species, state listed Candidate Endangered Species, and a CDFW Species of Special Concern	Not Present
Stephens' kangaroo rat ( <i>Dipodomys stephensi</i> )	Federally listed Endangered and state listed Threatened Species	Not Present
Quino checkerspot butterfly ( <i>Euphydryas editha quino</i> )	Federally listed Endangered Species	Not Present
Bald eagle ( <i>Haliaeetus leucocephalus</i> )	State listed Endangered and CDFW Fully Protected species	Not Present
Coastal California gnatcatcher ( <i>Poliophtila californica californica</i> )	Federally listed Threatened Species and CDFW Species of Special Concern	Not Present
California red-legged frog ( <i>Rana draytonii</i> )	Federally Threatened Species and a CDFW Species of Special Concern	Not Present
Riverside fairy shrimp ( <i>Streptocephalus woottoni</i> )	Federally listed Endangered Species	Not Present



Least Bell's vireo ( <i>Vireo bellii pusillus</i> )	Federal and state listed Endangered Species	Not Present
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The field survey did not identify suitable habitat for any of the above animal species present on the Project site, except the burrowing owl. As discussed above, the Project would be required to conduct 30-day preconstruction surveys for the presence of burrowing owls. With implementation of Mitigation Measure BIO-1, the Project would have a less than significant impact on sensitive animal species.

The Project site contains shrubs and is bordered by trees that can be utilized by nesting birds and raptors during the nesting bird season of February 1 through September 15. Therefore, the proposed Project has the potential to impact active bird nests if vegetation is removed during the nesting season. Nesting birds are protected under the federal Migratory Bird Treaty Act (MBTA) (United States Code Title 33, Section 703 et seq.; see also Code of Federal Regulations Title 50, Part 10) and Section 3503 of the California Fish and Game Code. Any activities that occur during the nesting/breeding season of birds protected by the MBTA could result in a potentially significant impact if requirements of the MBTA are not followed. However, implementation of mitigation measure Mitigation Measure BIO-2 would ensure MBTA compliance and would require a nesting bird survey to be conducted prior to the commencement of construction during nesting season, which would reduce potential impacts related to nesting avian species and native wildlife nursery sites to a less than significant level.

In summary, the Project has potential to impact burrowing owl and nesting birds. With implementation of Mitigation Measures BIO-1 and BIO-2 would reduce impacts to burrowing owl and nesting birds to a less than significant level.

**b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?**

**No Impact.** Riparian habitats occur along the banks of rivers, streams, or wetland areas. Sensitive natural communities are natural communities that are considered rare in the region by regulatory agencies or are known to provide habitat for sensitive animal or plant species. As described in the General Biological Assessment (Appendix C), the Project site does not contain any streams, drainages or riparian habitats. Thus, no impacts related to riparian habitat or other sensitive natural communities identified in local or regional plans would result from Project implementation.

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

**No Impact.** Wetlands are defined under the federal Clean Water Act as land that is flooded or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that normally does support, a prevalence of vegetation adapted to life in saturated soils. Wetlands include areas such as swamps, marshes, and bogs. The Project site does not contain natural wetlands (HES 2022). Therefore, the Project would not result in impacts to wetlands.



- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

**Less than Significant with Mitigation Incorporated.** Wildlife corridors are areas where wildlife movement is concentrated due to natural or anthropogenic constraints and corridors provide access to resources such as food, water, and shelter. Animals use these corridors to move between different habitats and provide avenues for wildlife dispersal, migration, and contact between other populations. As discussed in the General Biological Assessment, the Project site does not support conditions of migratory wildlife corridors or linkages. The Project site consists of flat, disturbed land dominated by ruderal vegetation. No wildlife movement corridors were found to be present on or adjacent to the Project site. Additionally, the surrounding area is partially developed and urban. There are no rivers, creeks, or open drainages near the site that could function as a wildlife corridor. Thus, implantation of the Project would not result in impacts related to wildlife movement or wildlife corridors.

However, the Project site contains shrubs and is bordered by trees that could be used for nesting by common bird species that are protected by the federal Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code Sections 3503.5, 3511, and 3515 during the avian nesting and breeding season that occurs between February 1 and September 15. The provisions of the MBTA prohibits disturbing or destroying active nests. Therefore, Mitigation Measure BIO-2 has been included to require that if commencement of demolition, construction, or vegetation clearing occurs between February 1 and September 15, a qualified biologist shall conduct a nesting bird survey no more than 3 days prior to commencement of activities to confirm the absence of nesting birds. With implementation of Mitigation Measure BIO-2, potential impacts of nesting birds would be less than significant.

- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

**No Impact.** Implementation of the Project is subject to all applicable federal, State, and local policies and regulations related to the protection of biological resources and tree preservation. Additionally, the Project is required to comply with the tree preservation standards as listed in Section 9.200 of the Municipal Code and with the Menifee Landscape Standards as listed in Section 9.195 of the Municipal Code. No trees exist on the Project site; therefore, the Project will not be subject to the City of Menifee's tree removal ordinance. Implementation of the proposed Project would not conflict with any local policies or ordinances protecting biological resources. No impact would occur, and mitigation is not required.

- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?**

**Less than Significant Impact.** The Project site is located within the boundaries of the MSHCP; therefore, it is subject to applicable provisions of the MSHCP as specified in response 4(a) above. The MSHCP provides for the assembly of a Conservation Area consisting of Core Areas and Linkages for the conservation of covered species. The Conservation Area is to be assembled from portions of the MSHCP Criteria Area, which consist of quarter-section (i.e., approximately 160-acre) Criteria Cells, each with specific criteria for the species conservation within that Cell. The Project site is not within the MSHCP Criteria Area; therefore, no Cell or Criteria analysis is required. While no burrowing owls currently occupy the site, in the event of subsequent occupation, Mitigation



Measure BIO-1 would sufficiently offset impacts to the species. No sensitive plant or animal species were identified on-site during the field survey. No on-site riparian or riverine areas were detected on the Project site. In summary, implementation of the proposed Project would not conflict with the MSHCP; as such, impacts would be less than significant, and no mitigation measures are required.

### **Existing Plans, Programs, or Policies**

None.

### **Mitigation Measures**

**Mitigation Measure BIO-1: Burrowing Owl Surveys.** A 30-day preconstruction survey is required prior to the commencement of Project activities (e.g., vegetation clearing, clearing and grubbing, tree removal, site watering) to ensure that no burrowing owls have colonized the site in the days or weeks preceding project activities. If burrowing owl are found to have colonized the project site prior to the initiation of construction, the Project proponent will immediately inform Western Riverside County Regional Conservation Authority (RCA) and the Wildlife Agencies and will need to prepare a Burrowing Owl Protection and Relocation Plan for approval by RCA and the Wildlife Agencies prior to initiating ground disturbance. If ground-disturbing activities occur but the site is left undisturbed for more than 30 days, a pre-construction survey will again be necessary to ensure burrowing owl has not colonized the site since it was last disturbed. If burrow owl is found, the same coordination with RCA and/or Wildlife Agencies described above will be necessary.

**Mitigation Measure BIO-2: Migratory Bird Treaty Act.** Prior to commencement of grading activities, the City Building Department, shall verify that in the event that vegetation and tree removal activities occur within the active breeding season for birds (February 1–September 15), the Project applicant (or their Construction Contractor) shall retain a qualified biologist (meaning a professional biologist that is familiar with local birds and their nesting behaviors) to conduct a nesting bird survey no more than 3 days prior to commencement of construction activities.

The nesting survey shall include the Project site and areas immediately adjacent to the site that could potentially be affected by Project-related construction activities, such as noise, human activity, and dust, etc. If active nesting of birds is observed within 100 feet of the designated construction area prior to construction, the qualified biologist shall establish an appropriate buffer around the active nests (e.g., as much as 500 feet for raptors and 300 feet for non-raptors [subject to the recommendation of the qualified biologist]), and the buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests.

### **Sources**

City of Menifee. Municipal Code. Available at: <https://codelibrary.amlegal.com/codes/menifee/latest/overview>

Hernandez Environmental Services (HES). 2022. General Biological Assessment and Western Riverside County MSHCP Consistency Analysis. (Appendix C).

U.S. Fish and Wildlife Service Migratory Bird Treaty Act. Available at: <https://www.fws.gov/birds/policies-and-regulations/laws-legislations/migratory-bird-treatyact.php>



	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b><u>5. CULTURAL RESOURCES.</u></b> Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to in Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

**Less than Significant Impact.** According to the *State CEQA Guidelines*, a historical resource is defined as something that meets one or more of the following criteria: (1) listed in, or determined eligible for listing in, the California Register of Historical Resources; (2) listed in a local register of historical resources as defined in Public Resources Code (PRC) Section 5020.1(k); (3) identified as significant in a historical resources survey meeting the requirements of PRC Section 5024.1(g); or (4) determined to be a historical resource by the project's Lead Agency.

The California Register of Historical Resources defines a "historical resource" as a resource that meets one or more of the following criteria: (1) associated with events that have made a significant contribution to the broad patterns or local or regional history of the cultural heritage of California or the United States; (2) associated with the lives of persons important to local, California, or national history; (3) embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of a master or possesses high artistic values; or (4) has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

A Phase I Cultural Resources Assessment was conducted by Brian F. Smith and Associates for the proposed Project and is included as Appendix D. As part of the Phase I Cultural Resources Assessment, an archaeological records search for the Project site and surrounding area was conducted through the Eastern Information Center at the University of California Riverside on March 1, 2022. The records search indicated that 34 previous studies have been conducted within a mile of the Project site and two resources have been identified within a mile of the Project site, however, no resources have been recorded within the boundaries of the Project site.

In addition to the record search, the Cultural Resources Assessment also included a field survey which was conducted on February 24, 2022. The field survey identified a single mid-twentieth century concrete well located along the southern property line. However, the well was determined to have no historical significance as it related to CEQA. Therefore, the Project would not result in impacts to historical resources pursuant to in Section 15064.5.



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

**Less than Significant Impact.** The Project site has been disturbed from previous agricultural uses. Project construction would include removal and re-compaction one foot below existing grade. The Project site is vacant and as historically been used for some agricultural uses and record search results did not indicate the presence of archeological resources within the Project site or immediate vicinity. Based upon the results of the cultural resources study, the potential to encounter buried resources were determined to be minimal. Therefore, no site-specific mitigation measures or mitigation monitoring requirements are recommended as a condition of approval for this proposed Project. Impacts are considered less than significant.

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

**Less than Significant Impact.** The Project site has been previously disturbed, as described above, and has not been previously used as a cemetery. It is not anticipated that implementation of the proposed Project would result in the disturbance of human remains. Existing regulation under the California Health and Safety Code, included as PPP CUL-1, outlines the procedures to undertake if human remains are found on the Project site. In the event of inadvertent discovery of human remains during Project construction, the State Health and Safety Code Section 7050.5 states that no further disturbance may occur in the vicinity of the body until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. Compliance with existing regulations would ensure impacts related to potential disturbance of human remains would be less than significant.

**Existing Plans, Programs, or Policies**

**PPP CUL-1: Human Remains.** Should human remains be discovered during Project construction, the Project will be required to comply with State Health and Safety Code Section 7050.5, which states that no further disturbance may occur in the vicinity of the body until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission, which will determine the identity of and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD must complete the inspection within 48 hours of notification by the NAHC.

**Mitigation Measures**

None.

**Sources**

Brian F. Smith and Associates, Inc. Cultural Resources Study for the Ethanac Business Center, April 27, 2022 (BFSA 2022). (Appendix D)

California Public Resources Code Section 21084.1

Governor's Office of Planning and Research, *State CEQA Guidelines*, Section 15064.5(a).



NorCal Engineering. Geotechnical Engineering Investigation, Proposed Industrial Waterhouse Development, 2022 (NorCal Engineering 2021). (See Appendix E)



	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>6. ENERGY.</b> Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The discussion below is based on the Ethanac and Barnett Energy Tables (Urban Crossroads 2022c) included as Appendix F.

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

**Less Than Significant Impact.**

**Construction**

During construction of the proposed Project, energy would be consumed in three general forms:

1. Petroleum-based fuels used to power off-road construction vehicles and equipment on the Project sites, construction worker travel to and from the Project sites, as well as delivery truck trips;
2. Electricity associated with providing temporary power for lighting and electric equipment; and
3. Energy used in the production of construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

The Project construction fuel usage over the estimated construction period would result in the need for 60,575 gallons of diesel fuel as shown in Table E-1 below. Tables E-2 shows the Project's construction vehicle fuel usage based on vehicle miles traveled and fuel usage factors outlined by CalEEMod 2022.1 and the 2021 version of the EMFAC. As shown in the table, construction worker fuel consumption would total approximately 15,808 gallons of fuel. Table E-3 outlines the Project's total vendor fuel usage based on factors outlined by CalEEMod 2022.1 and the 2021 version of the EMFAC. As shown in the table, vendor fuel consumption would total approximately 10,073 gallons of diesel fuel.

As shown in Table E-4, construction of the Project would be anticipated to result in 70,648 total gallons of diesel fuel and 15,808 gallons of gasoline fuel. Construction activities related to the proposed building and the associated infrastructure would not be expected to result in demand for fuel greater on a per-unit-of-development basis than other development projects in southern California. In addition, the extent of construction activities that would occur are limited to an approximate 14-month period, and the demand for construction-related electricity and fuels would be limited to that time frame.



**Table E- 1: Estimated Construction Fuel Consumption**

Construction Activity	Duration (Days)	Equipment	HP Rating	Quantity	Usage Hours	Load Factor	HP-hrs/day	Total Fuel Consumption
Site Preparation	10	Crawler Tractors	87	4	8	0.43	1,197	647
		Rubber Tired Dozers	367	3	8	0.40	3,523	1,904
Grading	30	Crawler Tractors	87	2	8	0.43	599	971
		Graders	148	1	8	0.41	485	787
		Excavators	36	2	8	0.38	219	355
		Scrapers	423	2	8	0.48	3,249	5,268
		Rubber Tired Dozers	367	1	8	0.40	1,174	1,904
Building Construction	200	Crawler Tractors	87	5	8	0.43	1,496	16,177
		Forklifts	82	5	8	0.20	656	7,092
		Generator Sets	14	2	8	0.74	166	1,792
		Cranes	367	2	8	0.29	1,703	18,410
		Welders	46	2	8	0.45	331	3,581
Paving	20	Pavers	81	2	8	0.42	544	588
		Paving Equipment	89	2	8	0.36	513	554
		Rollers	36	2	8	0.38	219	237
Architectural Coating	40	Air Compressors	37	1	8	0.48	142	307
CONSTRUCTION FUEL DEMAND (GALLONS DIESEL FUEL)								60,575

Source: Appendix F



**Table E- 2: Construction Worker Fuel Consumption Estimates**

Year	Construction Activity	Duration (Days)	Worker Trips/Day	Trip Length (miles)	VMT	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2023	LDA						
	Site Preparation	10	9	18.5	1,665	30.60	54
	Grading	30	10	18.5	5,550	30.60	181
	Building Construction	44	53	18.5	43,142	30.60	1,410
	LDT1						
	Site Preparation	10	5	18.5	925	24.15	38
	Grading	30	5	18.5	2,775	24.15	115
	Building Construction	44	27	18.5	21,978	24.15	910
	LDT2						
	Site Preparation	10	5	18.5	925	23.88	39
	Grading	30	5	18.5	2,775	23.88	116
	Building Construction	44	27	18.5	21,978	23.88	920
2024	LDA						
	Building Construction	156	53	18.5	152,958	31.51	4,855
	Paving	20	8	18.5	2,960	31.51	94
	Architectural Coating	40	11	18.5	8,140	31.51	258
	LDT1						
	Building Construction	156	27	18.5	77,922	24.62	3,165
	Paving	20	4	18.5	1,480	24.62	60
	Architectural Coating	40	6	18.5	4,440	24.62	180
	LDT2						



	Building Construction	156	27	18.5	77,922	24.57	3,171
	Paving	20	4	18.5	1,480	24.57	60
	Architectural Coating	40	6	18.5	4,440	24.57	181
<b>TOTAL CONSTRUCTION WORKER FUEL CONSUMPTION</b>							<b>15,808</b>

Source: Appendix F

**Table E- 3: Construction Vendor Fuel Consumption Estimates**

Year	Construction Activity	Duration (Days)	Vendor Trips/Day	Trip Length (miles)	VMT	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2023	MHD						
	Site Preparation	10	1	10.2	102	8.40	12
	Grading	30	3	10.2	918	8.40	109
	Building Construction	44	17	10.2	7,630	8.40	908
	HHD (Vendor)						
	Site Preparation	10	1	10.2	102	6.04	17
2024	Grading	30	3	10.2	918	6.04	152
	Building Construction	44	17	10.2	7,630	6.04	1,263
	MHD						
	Building Construction	156	17	10.2	27,050	8.47	3,192
	HHD (Vendor)						
	Building Construction	156	17	10.2	27,050	6.12	4,419
<b>TOTAL CONSTRUCTION VENDOR FUEL CONSUMPTION</b>							<b>10,073</b>



**Table E- 4: Total Construction Fuel Usage**

Construction Source	Gallons of Diesel Fuel	Gallons of Gasoline Fuel
Construction Vehicles	60,575	-
Worker Vehicles	-	15,808
Vendor Vehicles	10,073	-
Total	70,648	15,808

Source: Appendix F

**Operation**

Once operational, the Project would generate demand for electricity, natural gas, as well as gasoline for motor vehicle trips. Operational use of energy includes the heating, cooling, and lighting of the building, water heating, operation of electrical systems and plug-in appliances, parking lot and outdoor lighting, and the transport of electricity, natural gas, and water to the areas where they would be consumed. This use of energy is typical for urban development, and no operational activities or land uses would occur that would result in extraordinary energy consumption.

As detailed in Table E-5, operation of the proposed Project is estimated to result in approximately 1,541,371 kilowatt-hours (kWh) of electricity per year. As shown in table E-6, operation of the Project is anticipated to result in 200,310 gallons of gasoline fuel. In addition, the Project would adhere to City of Menifee Industrial Good Neighbor Policies, that limits idling times to no more than 3 minutes, which would preclude unnecessary and wasteful consumption of fuel due to unproductive idling of trucks.

**Table E- 5: Project-Generated Traffic Annual Fuel Consumption**

Vehicle Type	Average Vehicle Fuel Economy (mpg)	Annual VMT	Estimated Annual Fuel Consumption (gallons)
LDA	30.60	816,324	26,675
LDT1	24.15	66,173	2,740
LDT2	23.88	324,568	13,591
MDV	15.29	223,991	14,652
MCY	15.29	32,940	2,155
LHD1	15.81	129,158	8,168
LHD2	15.29	36,441	2,384
MHD	8.40	209,204	24,904
HHD	6.04	634,721	105,042
<b>TOTAL (ALL VEHICLES)</b>		<b>2,473,518</b>	<b>200,310</b>

MDV = Medium Duty Trucks; LHDT1 = Light-Duty Trucks (Vehicles under the LHDT1 category have a GVWR of 8,501 to 10,000 lbs.);

LHDT2 = Light-Duty Trucks (Vehicles under the LHDT2 category have a GVWR of 10,001 to 14,000 lbs.); OBUS = Other Buses; UBUS = Urban Buses

MCY = Motorcycle; SBUS = School Bus; MH = Motorhome



**Table E- 6: Project Annual Operational Natural Gas and Electricity Demand Summary**

Land Use	Natural Gas Demand (kBtu/year)	Electricity Demand (kWh/year)
Manufacturing	0	621,990
Warehousing	0	860,235
Landscape	0	0
Parking	0	59,146
Other Asphalt Surfaces	0	0
<b>TOTAL PROJECT ENERGY DEMAND</b>	<b>0</b>	<b>1,541,371</b>

The proposed Project has no unusual characteristics that would make the construction fuel and energy consumption associated with construction of the Project less efficient compared with other similar construction sites throughout the state. The consumption would also be temporary and localized. Operation of the 251,133 SF industrial building would comply with all the energy efficiency requirements under Title 24 (as provided in Chapter 8.06 of the City's Municipal Code and included as PPP ENG-1) and all applicable City business and energy codes ordinances. Therefore, the construction and operation of the Project would result in a less than significant impact for inefficient, wasteful, or unnecessary energy use, and no mitigation would be required.

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

**No Impact.** The State of California has established a comprehensive framework for the use of efficient energy. This occurs through the implementation of the Clean Energy and Pollution Reduction Act of 2015 (SB 350), Title 24 Energy Efficiency Standards, and the California Green (CalGreen) Building Standards (included as PPP ENG-1). Additionally, the City's General Plan includes Policy OCS-4.1, which requires application of energy efficiency and conservation practices in land use, transportation demand management, and subdivision and building design. Project design would be consistent with requirements of CalGreen standards pertaining to building energy efficiency. Standards incorporate requirements for energy-efficient windows, insulation, lighting, ventilation systems, and low flow fixtures. The proposed Project would comply with existing regulations as ensured through the City's plan check and permitting process. Thus, construction and operation of the proposed Project would not conflict with or obstruct State or local plans for energy efficiency or renewable energy.

**Existing Plans, Programs, or Policies**

**PPP ENG-1: CalGreen Compliance.** The Project is required to comply with the CalGreen Building Code to ensure efficient use of energy as adopted under Chapter 8.06 of the City's Municipal Code. CalGreen specifications are required to be incorporated into building plans as a condition of building permit approval.



### **Mitigation Measures**

No mitigation measures related to energy are required.

### **Sources**

Urban Crossroads. Ethanac and Barnett Energy Tables (Urban Crossroads 2022c) (Appendix F).



	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b><u>7. GEOLOGY AND SOILS.</u></b> Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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

- i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?**

**No Impact.** The Project site is not located within a designated Alquist-Priolo Earthquake Fault Zone and no faults were identified on the site (NorCal Engineering 2021). The closest known active fault to the site with the potential for surface fault rupture is the Elsinore fault, located approximately 4.97 miles from the site. Therefore, the Project would not directly or indirectly cause potential risk of loss, injury, or death involving the rupture of a known earthquake fault. No impact would occur.

- ii. Strong seismic ground shaking?**

**Less than Significant Impact.** The Project site is located within a seismically active region of Southern California. As mentioned previously, the Elsinore fault is located approximately 4.97 miles from the site (NorCal Engineering 2021). The amount of motion expected at the Project site can vary from none to forceful depending upon the distance to the fault and the magnitude of the earthquake. Ground shaking originating from earthquakes along other active faults in the region is expected to induce lower horizontal accelerations due to smaller anticipated earthquakes and/or greater distances to other faults.

Structures built in the City of Menifee are required to be built in compliance with CBC, which regulates all building and construction projects within the City and implements a minimum standard for building design and construction that includes specific requirements for seismic safety, excavation, foundations, retaining walls, and site demolition. Compliance with the CBC would include the incorporation of 1) seismic safety features to minimize the potential for significant effects as a result of earthquakes; 2) proper building footings and foundations; and 3) construction of the building structures so that it would withstand the effects of strong ground shaking. Implementation of CBC standards would be verified by the City during the plan check and permitting process. Because the proposed Project would be constructed in compliance with the CBC, the proposed Project would result in a less than significant impact related to strong seismic ground shaking.

- iii. Seismic-related ground failure, including liquefaction?**

**Less than Significant Impact.** Soil liquefaction is a phenomenon in which saturated, cohesionless soils layers, located within approximately 50 feet of the ground surface, lose strength due to cyclic pore water pressure generation from seismic shaking or other large cyclic loading. During the loss of stress, the soil acquires “mobility” sufficient to permit both horizontal and vertical movements. Soil properties and soil conditions such as type, age, texture, color, and consistency, along with historical depths to ground water are used to identify, characterize, and correlate liquefaction susceptible soils.

According to the Geotechnical Engineering Investigation, the Project site is not located within a liquefaction hazard zone (NorCal Engineering 2021). The potential for liquefaction at the site is expected to be very low due to the dense and very dense subsurface soils. In addition, the proposed Project would be required to be constructed in compliance with the CBC and the City’s Municipal Code, included as PPP GEO-1, which would be verified through the City’s plan check and permitting process. With compliance with existing regulations and the Project location, impacts related to seismically related ground failure and liquefaction would be less than significant.



#### iv. Landslides?

**No Impact.** Landslides and other slope failures are secondary seismic effects that occur during or soon after earthquakes. Areas that are most susceptible to earthquakes induced landslides are steep slopes underlain by loose, weak soils, and areas on or adjacent to existing landslide deposits.

As described above, the Project site is located in a seismically active region subject to strong ground shaking. However, the Geotechnical Engineering Investigation states that the site is not within an area identified to be a seismically-induced landslide hazard zone (Leighton 2021). Therefore, the Project would not cause potential substantial adverse effects related to slope instability or seismically induced landslides.

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

**Less than Significant Impact.** Construction of the proposed Project has the potential to contribute to soil erosion and the loss of topsoil. Excavations and grading activities that would be required for the Project would expose and loosen topsoil, which could be eroded by wind or water.

Chapter 15.01 of the City's Municipal Code, Storm Water/Urban Runoff, implements the requirements of the Santa Ana Regional Water Quality Control Board (RWQCB) National Pollutant Discharge Elimination System (NPDES) Storm Water Permit Regional Board Order No. R8-2010-0033, as amended, (MS4 Permit) establishes minimum stormwater management requirements and controls that are required to be implemented for construction activities for the Project.

To reduce the potential for soil erosion and the loss of topsoil, a Stormwater Pollution Prevention Plan (SWPPP) is required by these City and RWQCB regulations to be developed by a QSD (Qualified SWPPP Developer), which would be implemented by PPP WQ-1. The SWPPP is required to address site-specific conditions related to specific grading and construction activities that could cause erosion and the loss of topsoil and provide erosion control BMPs to reduce or eliminate the erosion and loss of topsoil. Erosion control BMPs include use of: silt fencing, fiber rolls, or gravel bags, stabilized construction entrance/exit, hydroseeding, etc. With compliance with the City's Municipal Code stormwater management requirements, RWQCB SWPPP requirements, and installation of BMPs, which would be implemented by the City's Project review by the Department of Public Works, construction impacts related to erosion and loss of topsoil would be less than significant.

#### c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?

**Less than Significant Impact.** Landslides and other forms of mass wasting, including mud flows, debris flows, and soil slips, occur as soil moves downslope under the influence of gravity. Landslides are frequently triggered by intense rainfall or seismic shaking. As described in Response a) iv., the Project site is located in a relatively flat developed urban area that does not contain or adjacent to large slopes, and the Project would not generate large slopes. Therefore, impacts related to landslides would not occur.

Lateral spreading is a type of liquefaction-induced ground failure associated with the lateral displacement of surficial blocks of sediment resulting from liquefaction in a subsurface layer. Once liquefaction transforms the subsurface layer into a fluid mass, gravity plus the earthquake inertial forces may cause the mass to move downslope towards a free face (such as a river channel or an



embankment). Lateral spreading may cause large horizontal displacements and such movement typically damages pipelines, utilities, bridges, and structures. Since the Project site is relatively flat and constrained laterally, earthquake-induced lateral spreading is not considered a hazard at the site. Thus, impacts related to lateral spreading would likely not occur.

Subsidence is a general lowering of the ground surface over a large area that is generally attributed to lowering of the ground water levels within a groundwater basin. Localized or focal subsidence or settlement of the ground can occur as a result of an earthquake motion in an area where groundwater in basin is lowered. The depth of groundwater was detected at an elevation of greater than 50 feet below existing grade (NorCal Engineering 2021). The Project would not pump water from the Project area, however, slight subsidence is anticipated as a result of soil excavation and compaction. Thus, impacts related to subsidence would be less than significant.

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

**Less than Significant Impact.** Expansive soils contain certain types of clay minerals that shrink or swell as the moisture content changes; the shrinking or swelling can shift, crack, or break structures built on such soils. Arid or semiarid areas with seasonal changes of soil moisture experience, such as southern California, have a higher potential of expansive soils than areas with higher rainfall and more constant soil moisture.

The Geotechnical Engineering Investigation determined that the site soils are anticipated to have a “medium” expansion potential based on soils testing. In addition, as described in the previous responses, the Project would be required to be constructed in compliance with the CBC and the City’s Municipal Code, that require appropriate back fill, compaction of soils, and foundation design to ensure stable soils, which would be verified through the City’s plan check and permitting process. Additionally, the Geotechnical Engineering Investigation includes expansive soil guidelines for the Project. Thus, impacts related to expansive soils would be less than significant.

**e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?**

**No Impact.** No septic tanks or alternative wastewater disposal systems are proposed. The Project would connect to the existing infrastructure that is adjacent to the site. Therefore, no impacts related to the use of such facilities would occur from implementation of the Project.

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

**Less than Significant with Mitigation Incorporated.** Paleontological resources, or fossils, are the remains of ancient plants and animals that can provide scientifically significant information about the history of life on Earth. Paleontological “sensitivity” is defined as the potential for a geologic unit to produce scientifically significant fossils. This sensitivity is determined by rock type, past history of the rock unit in producing significant fossils, and fossil localities that are recorded from that unit. Paleontological sensitivity is assigned based on fossil data collected from the entire geologic unit, not just a specific site.

A Paleontological Assessment was prepared for the Project by Brian F. Smith Associates (BFS A PALEO 2022). Research has confirmed the existence of potentially fossiliferous Pleistocene old



alluvia fan deposits (Qofs) at the site and the occurrence of terrestrial vertebrate fossils from Pleistocene alluvial fan deposits in western Riverside County is well documented. The “High” paleontological sensitivity rating assigned to the formations for yielding paleontological resources supports the recommendation that paleontological monitoring be implemented during mass grading and excavation activities to mitigate any adverse impacts to potential nonrenewable paleontological resources. Full-time monitoring of undisturbed old alluvial deposits at the site is warranted starting at 5-feet below the surface. Therefore, Mitigation Measure GEO-1 has been included to provide procedures to be followed in the unlikely event that potential paleontological resources are discovered during grading or excavation activities. Mitigation Measure GEO-1 would reduce potential impacts to undiscovered paleontological resources to a less than significant level.

### **Existing Plans, Programs, or Policies**

**PPP GEO-1: California Building Code.** The Project is required to comply with the California Building Code as included in the City’s Municipal Code Chapter 8.26 to preclude significant adverse effects associated with seismic hazards. California Building Code related and geologist and/or civil engineer specifications for the Project are required to be incorporated into grading plans and specifications as a condition of Project approval.

**PPP WQ-1: SWPPP.** Prior to grading permit issuance, the Project developer shall have a Stormwater Pollution Prevention Plan (SWPPP) prepared by a QSD (Qualified SWPPP Developer) in accordance with the City’s Municipal Code Chapter 15.01 Storm Water/Urban Runoff and the Santa Ana RWQCB NPDES Storm Water Permit Regional Board Order No. R8-2010-0033. The SWPPP shall incorporate all necessary Best Management Practices (BMPs) and other NPDES regulations to limit the potential of erosion and polluted runoff during construction activities. Project contractors shall be required to ensure compliance with the SWPPP and permit periodic inspection of the construction site by Menifee staff or its designee to confirm compliance.

### **Mitigation Measures**

**Mitigation Measure GEO-1: Paleontological Resources Monitoring.** The following Paleontological Resources Monitoring guidelines, outlined below, are based on the findings stated above. Paleontological monitoring may be reduced on the observations and recommendations of the professional-level Project paleontologist. The following guidelines, when implemented, would reduce potential impacts of paleontological resources to a level below significant:

1. Monitoring of mass grading and excavation activities in areas identified as likely to contain paleontological resources shall be performed by a city-qualified paleontologist or paleontological monitor supervised by a city-qualified paleontologist. Starting at five feet below the surface, monitoring will be conducted full-time in areas of grading or excavation in undisturbed Pleistocene old alluvial fan deposits.
2. Paleontological monitors will be equipped to salvage fossils as they are unearthed to avoid construction delays. The monitor must be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens in a timely manner. Monitoring may be reduced if the potentially fossiliferous units are not present in the subsurface, or, if present, are determined upon exposure and examination by qualified paleontological personnel to have low potential to contain fossil resources. The monitor shall notify the project paleontologist, who will then notify the concerned parties of the discovery.



3. Paleontological salvage during trenching and boring activities is typically from the generated spoils and does not delay the trenching or drilling activities. Fossils are collected and placed in cardboard flats or plastic buckets and identified by field number, collector, and date collected. Notes are taken on the map location and stratigraphy of the site, which is photographed before it is vacated and the fossils are removed to a safe place. On mass grading projects, discovered fossil sites are protected by flagging to prevent them from being overrun by earthmovers (scrapers) before salvage begins. Fossils are collected in a similar manner, with notes and photographs being taken before removing the fossils. Precise location of the site is determined with the use of handheld GPS units. If the site involves remains from a large terrestrial vertebrate, such as large bone(s) or a mammoth tusk, that is/are too large to be easily removed by a single monitor, a fossil recovery crew shall excavate around the find, encase the find within a plaster and burlap jacket, and remove it after the plaster is set. For large fossils, use of the contractor's construction equipment may be solicited to help remove the jacket to a safe location.
4. Isolated fossils are collected by hand, wrapped in paper, and placed in temporary collecting flats or five-gallon buckets. Notes are taken on the map location and stratigraphy of the site, which is photographed before it is vacated and the fossils are removed to a safe place.
5. Particularly small invertebrate fossils typically represent multiple specimens of a limited number of organisms, and a scientifically suitable sample can be obtained from one to several five-gallon buckets of fossiliferous sediment. If it is possible to dry screen the sediment in the field, a concentrated sample may consist of one or two buckets of material. For vertebrate fossils, the test is usually the observed presence of small pieces of bones within the sediments. If present, as multiple five-gallon buckets of sediment can be collected and returned to a separate facility to wet-screen the sediment.
6. In accordance with the "Microfossil Salvage" section of the SVP guidelines (2010:7), bulk sampling and screening of fine-grained sedimentary deposits (including carbonate-rich paleosols) must be performed if the deposits are identified to possess indications of producing fossil "microvertebrates" to test the feasibility of the deposit to yield fossil bones and teeth.
7. In the laboratory, individual fossils are cleaned of extraneous matrix, any breaks are repaired, and the specimen, if needed, is stabilized by soaking in an archivally approved acrylic hardener (e.g., a solution of acetone and Paraloid B-72).
8. Recovered specimens are prepared to a point of identification and permanent preservation (not display), including screen-washing sediments to recover small invertebrates and vertebrates. Preparation of individual vertebrate fossils is often more time-consuming than for accumulations of invertebrate fossils.
9. Identification and curation of specimens into a professional, accredited public museum repository with a commitment to archival conservation and permanent retrievable storage (e.g., the WSC) shall be conducted. The paleontological program should include a written repository agreement prior to the initiation of mitigation activities. Prior to curation, the lead agency (the City of Menifee) will be consulted on the repository/museum to receive the fossil material.



10. A final report of findings and significance will be prepared, including lists of all fossils recovered and necessary maps and graphics to accurately record their original location(s). The report, when submitted to, and accepted by, the appropriate lead agency, will signify satisfactory completion of the project program to mitigate impacts to any potential nonrenewable paleontological resources (*i.e.*, fossils) that might have been lost or otherwise adversely affected without such a program in place.

### **Sources**

Brian F. Smith and Associates, Inc. Paleontological Assessment, 2022 (BFSA PALEO 2022). (See Appendix G)

NorCal Engineering. Geotechnical Engineering Investigation, Proposed Industrial Waterhouse Development, 2022 (NorCal Engineering 2021). (See Appendix E)



	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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**8. GREENHOUSE GAS EMISSIONS.**

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The discussion below is based on the Greenhouse Gas Impact Analysis (Urban Crossroads 2022d) included as Appendix H.

**Explanation**

Constituent gases of the Earth's atmosphere, called atmospheric greenhouse gases (GHGs), play a critical role in the Earth's radiation amount by trapping infrared radiation from the Earth's surface, which otherwise would have escaped to space. Prominent greenhouse gases contributing to this process include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), ozone (O<sub>3</sub>), water vapor, nitrous oxide (N<sub>2</sub>O), and chlorofluorocarbons (CFCs). This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable climate. Anthropogenic (caused or produced by humans) emissions of these greenhouse gases in excess of natural ambient concentrations are responsible for the enhancement of the Greenhouse Effect and have led to a trend of unnatural warming of the Earth's natural climate, known as global warming or climate change. Emissions of gases that induce global warming are attributable to human activities associated with industrial/manufacturing, agriculture, utilities, transportation, and residential land uses.

Section 15364.5 of the California Code of Regulations defines GHGs to include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. Transportation is responsible for 37 percent of the state's greenhouse gas emissions, followed by electricity generation. Emissions of CO<sub>2</sub> and N<sub>2</sub>O are byproducts of fossil fuel combustion. Methane, a potent greenhouse gas, results from off-gassing associated with agricultural practices and landfills. Sinks of CO<sub>2</sub>, where CO<sub>2</sub> is stored outside of the atmosphere, include uptake by vegetation and dissolution into the ocean.

California has passed several bills and the Governor has signed at least three executive orders regarding greenhouse gases. GHG statutes and executive orders (EO) include AB 32, SB 1368, EO S-03-05, EO S-20-06 and EO S-01-07. These regulations require the use of alternative energy, such as solar power. Solar projects produce electricity with no GHG emissions and assist in offsetting GHG emissions produced by fossil-fuel-fired power plants.



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

**Less than Significant Impact.** Global climate change (GCC) describes alterations in weather features (e.g., temperature, wind patterns, precipitation, and storms) that occur across the Earth as a whole. GCC is not confined to a particular project area and is generally accepted as the consequence of global industrialization over the last 200 years. A typical project, even a very large one, does not generate enough GHG emissions on its own to influence global climate change significantly; hence, the issue of global climate change is, by definition, a cumulative environmental impact.

The principal GHGs of concern contributing to the greenhouse effect are CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. GHGs are produced by both direct and indirect emissions sources. Direct emissions include consumption of natural gas, heating and cooling of buildings, landscaping activities and other equipment used directly by land uses. Indirect emissions include the consumption of fossil fuels for vehicle trips, electricity generation, water usage, and solid waste disposal. The large majority of GHG emissions generated from residential projects are related to vehicle trips.

The City has not established local CEQA significance thresholds for GHG emissions; however, the SCAQMD has proposed interim numeric GHG significance thresholds that are based on capture of approximately 90 percent of emissions from development, which is 3,000 metric tons carbon dioxide equivalent (MTCO<sub>2</sub>e) per year (SCAQMD 2008). This approach is widely used by cities in the South Coast Air Basin, including the City of Menifee. As such, this threshold is utilized herein to determine if GHG emissions from this Project would be significant.

**Construction**

During construction, temporary sources of GHG emissions include construction equipment and workers' commutes to and from the site. The combustion of fossil-based fuels creates GHGs such as CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O. As shown on Table GHG-1, the Project has the potential to generate a total of approximately 40.63 MTCO<sub>2</sub>e per year from construction emissions amortized over 30 years per SCAQMD methodology.

**Table GHG- 1: Project Construction GHG Emissions**

Year	Emissions (MT/yr)				
	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	Refrigerants	Total CO <sub>2</sub> e <sup>2</sup>
2023	675.00	0.03	0.04	0.77	689.00
2024	524.00	0.02	0.02	0.29	530.00
Total GHG Emissions	1,199.00	0.05	0.06	1.06	1,219.00
<b>Amortized Construction Emissions</b>	<b>39.97</b>	<b>1.67E-03</b>	<b>2.00E-03</b>	<b>0.04</b>	<b>40.63</b>

Source: Appendix H

<sup>2</sup> CalEEMod reports the most common GHGs emitted which include CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O. These GHGs are then converted into the CO<sub>2</sub>e by multiplying the individual GHG by the GWP.



## Operation

During operations, the Project would generate long-term GHG emissions from vehicular trips; water, natural gas, and electricity consumption; and solid waste generation. Operational activities associated with the Project would result in emissions of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O from the following primary sources:

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions
- On-Site Cargo Handling Equipment Emissions
- Water Supply, Treatment, and Distribution
- Solid Waste
- Refrigerants

Natural gas use results in the emission of 2 GHGs: CH<sub>4</sub> (the major component of natural gas) and CO<sub>2</sub> (from the combustion of natural gas). Electricity use can result in GHG production if the electricity is generated by combusting fossil fuel.

The Project would result in approximately 1,121.38 MTCO<sub>2</sub>e/yr from construction, area, energy, waste, and water usage. In addition, the Project has the potential to result in an additional 1,864.00 MTCO<sub>2</sub>e per year from mobile sources under if the assumption is made that all of the vehicle trips to and from the Project are “new” trips resulting from the development of the Project. As such, the Project has the potential to generate a total of approximately 2,985.38 MTCO<sub>2</sub>e per year. The Project would not exceed the SCAQMD’s numeric threshold of 3,000 MTCO<sub>2</sub>e per year and impacts would be less than significant.

**Table GHG- 2: Project Total Net GHG Emissions**

Emission Source	Emissions (MT/yr)				
	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	Refrigerants	Total CO <sub>2</sub> e
Annual construction-related emissions amortized over 30 years	39.97	1.67E-03	2.00E-03	0.04	40.63
Mobile Source	1,797.00	0.04	0.21	2.52	1,864.00
Area Source	5.11	0.00	0.00	0.00	5.52
Energy Source	243.40	0.02	0.00	0.00	244.90
Water Usage	82.44	1.90	0.04	0.00	143.40
Waste	21.79	2.18	0.00	0.00	76.25
Refrigerants	0.00	0.00	0.00	38.38	38.38
On-Site Equipment					572.30
<b>Total CO<sub>2</sub>e (All Sources)</b>	<b>2,985.38</b>				

Source: Appendix H



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

**Less than Significant Impact.** The Project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. As described in the previous response, the Project would not exceed thresholds related to GHG emissions. In addition, the Project would comply with regulations imposed by the state that reduce GHG emissions, as described below:

On September 8, 2016, Governor Brown signed SB 32 and its companion bill, AB 197. SB 32 requires the state to reduce statewide GHG emissions to 40 percent below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal and provides an intermediate goal to achieving S-3-05, which sets a statewide GHG reduction target of 80% below 1990 levels by 2050. AB 197 creates a legislative committee to oversee regulators to ensure that CARB not only responds to the Governor, but also the Legislature.

The 2017 Scoping Plan Update reflects the 2030 target of a 40 percent reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32. Table GHG-3 summarizes the Project's consistency with the 2017 Scoping Plan. As summarized, the project will not conflict with any of the provisions of the Scoping Plan and in fact supports seven of the action categories.

**Table GHG- 3: 2017 Scoping Plan Consistency**

Action	Responsible Parties	Consistency
<b>Implement SB 350 by 2030</b>		
Increase the Renewables Portfolio Standard to 50% of retail sales by 2030 and ensure grid reliability.	CPUC, CEC, CARB	Consistent. The Project would use energy from Southern California Edison (SCE). SCE has committed to diversify its portfolio of energy sources by increasing energy from wind and solar sources. The Project would not interfere with or obstruct SCE energy source diversification efforts.
Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030.		Consistent. The Project would be constructed in compliance with applicable California Building Code requirements. Specifically, new buildings must achieve compliance with the current Building and Energy Efficiency Standards and the current California Green Building Standards requirements, or the applicable standards in place at the time building permit document submittals are made. The proposed Project includes energy efficient field lighting and fixtures that meet the current Title 24 Standards throughout the Project Site and would be a modern development with energy efficient boilers, heaters, and air conditioning systems.
Reduce GHG emissions in the electricity sector through the implementation of the above measures and other actions as modeled in Integrated Resource Planning (IRP) to meet GHG emissions reductions planning targets in the IRP process. Load-serving entities and publicly owned utilities meet GHG emissions reductions planning targets through a combination of measures as described in IRPs.		



Action	Responsible Parties	Consistency
<b>Implement Mobile Source Strategy (Cleaner Technology and Fuels)</b>		
At least 1.5 million zero emission and plug-in hybrid light-duty EVs by 2025.	CARB, California State Transportation Agency (CalSTA), Strategic Growth Council (SGC), California Department of Transportation (Caltrans), CEC, OPR, Local Agencies	Consistent. This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB zero emission and plug-in hybrid light-duty EV 2025 targets. As this is a CARB enforced standard, vehicles that access the Project are required to comply with the standards and will therefore comply with the strategy.
At least 4.2 million zero emission and plug-in hybrid light-duty EVs by 2030.		Consistent. This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB zero emission and plug-in hybrid light-duty EV 2030 targets. As this is a CARB enforced standard, vehicles that access the Project are required to comply with the standards and will therefore comply with the strategy.
Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean cars regulations.		Consistent. This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB efforts to further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean cars regulations. As this is a CARB enforced standard, vehicles that access the Project are required to comply with the standards and will therefore comply with the strategy.
Medium- and Heavy-Duty GHG Phase 2.		Consistent. This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB efforts to implement Medium- and Heavy-Duty GHG Phase 2. As this is a CARB enforced standard, vehicles that access the Project are required to comply with the standards and will therefore comply with the strategy.
Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20% of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100% of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NO <sub>x</sub> standard.		Consistent. The Project would not obstruct or interfere with agency efforts to transition to a suite of to-be-determined innovative clean transit options.



Action	Responsible Parties	Consistency
Last Mile Delivery: New regulation that would result in the use of low NO <sub>x</sub> or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5% of new Class 3-7 truck sales in local fleets starting in 2020, increasing to 10% in 2025 and remaining flat through 2030.		Consistent. The Project would not obstruct or interfere with agency efforts to use low NO <sub>x</sub> or cleaner engines or the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California.
Further reduce vehicle miles traveled (VMT) through continued implementation of SB 375 and regional Sustainable Communities Strategies; forthcoming statewide implementation of SB 743; and potential additional VMT reduction strategies not specified in the Mobile Source Strategy but included in the document "Potential VMT Reduction Strategies for Discussion."		Consistent. This Project would not obstruct or interfere with implementation of SB 375 and would therefore not conflict with this measure.
Increase stringency of SB 375 Sustainable Communities Strategy (2035 targets).	CARB	Consistent. The Project would not obstruct or interfere with agency efforts to increase stringency of SB 375 Sustainable Communities Strategy.
Harmonize project performance with emissions reductions and increase competitiveness of transit and active transportation modes (e.g., via guideline documents, funding programs, project selection, etc.).	CalSTA, SGC, OPR, CARB, Governor's Office of Business and Economic Development (GO- Biz), California Infrastructure and Economic Development Bank (IBank), Department of Finance (DOF), California Transportation Commission (CTC), Caltrans	Consistent. The Project would not obstruct or interfere with agency efforts to harmonize transportation facility project performance with emissions reductions, increase competitiveness of transit and active transportation modes, implantation of sidewalks/Class I shared use trails, and bus stops.
By 2019, develop pricing policies to support low-GHG transportation (e.g., low-emission vehicle zones for heavy duty, road user, parking pricing, transit discounts).	CalSTA, Caltrans, CTC, OPR, SGC,	Consistent. The Project would not obstruct or interfere with agency efforts to develop pricing policies to support low-GHG transportation.



Action	Responsible Parties	Consistency
	CARB	
<b>Implement California Sustainable Freight Action Plan</b>		
Improve freight system efficiency.	CalSTA, CalEPA, CNRA, CARB, Caltrans, CEC, GO-Biz	Consistent. This measure would apply to all trucks accessing the Project site, this may include existing trucks or new trucks that are part of the statewide goods movement sector. The Project would not obstruct or interfere with agency efforts to improve freight system efficiency.
Deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.		Consistent. The Project would not obstruct or interfere with agency efforts to deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.
Adopt a Low Carbon Fuel Standard with a Carbon Intensity reduction of 18%.	CARB	Consistent. When adopted, this measure would apply to all fuel purchased and used by the Project in the state. The Project would not obstruct or interfere with agency efforts to adopt a Low Carbon Fuel Standard with a Carbon Intensity reduction of 18%.
<b>Implement the Short-Lived Climate Pollutant Strategy (SLPS) by 2030</b>		
40% reduction in methane and hydrofluorocarbon emissions below 2013 levels.	CARB, CalRecycle, CDFA, California State Water Resource Control Board (SWRCB), Local Air Districts	Consistent. The Project would not obstruct or interfere with agency efforts to reach a 40% reduction in methane and hydrofluorocarbon emissions below 2013 levels or 50% reduction in black carbon emissions below 2013 levels.
50% reduction in black carbon emissions below 2013 levels.		
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.	CARB, CalRecycle, CDFA, SWRCB, Local Air Districts	Consistent. The Project would not obstruct or interfere with agency efforts to develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.
Implement the post-2020 Cap-and-Trade Program with declining annual caps.	CARB	Consistent. Cap-and-Trade Program provisions do not apply to this Project. The Project would not obstruct or interfere with agency efforts to implement the post-2020 Cap-and-Trade Program.



Action	Responsible Parties	Consistency
<b>By 2018, develop Integrated Natural and Working Lands Implementation Plan to secure California's land base as a net carbon sink</b>		
Protect land from conversion through conservation easements and other incentives.	CNRA, Departments Within CDFA, CalEPA, CARB	Consistent. The Project would not obstruct or interfere with agency efforts to protect land from conversion through conservation easements and other incentives. It should also be noted that the Project site is not an identified property that needs to be conserved.
Increase the long-term resilience of carbon storage in the land base and enhance sequestration capacity.		Consistent. The Project site is vacant disturbed property and does not comprise an area that would effectively provide for carbon sequestration. The Project would not obstruct or interfere agency efforts to increase the long-term resilience of carbon storage in the land base and enhance sequestration capacity.
Utilize wood and agricultural products to increase the amount of carbon stored in the natural and built environments.		Consistent. To the extent appropriate for the proposed buildings, wood products would be used in construction, including for the roof structure. Additionally, the proposed project includes landscaping, including.
Establish scenario projections to serve as the foundation for the Implementation Plan.		Consistent. The Project would not obstruct or interfere with agency efforts to establish scenario projections to serve as the foundation for the Implementation Plan.
Implement Forest Carbon Plan	CNRA, California Department of Forestry and Fire Protection (CAL FIRE), CalEPA and Departments Within	Consistent. The Project would not obstruct or interfere with agency efforts to implement Forest Carbon Plan.
Identify and expand funding and financing mechanisms to support GHG reductions across all sectors.	State Agencies & Local Agencies	Consistent. The Project would not obstruct or interfere with agency efforts to fund and finance mechanisms to support GHG reductions across all sectors.

Source: Appendix H

As shown above, the Project would not conflict with any of the 2017 Scoping Plan elements as any regulations adopted would apply directly or indirectly to the Project. Further, recent studies show that the State's existing and proposed regulatory framework will allow the State to reduce its GHG emissions level to 40% below 1990 levels by 2030



The City currently does not have an adopted Climate Action Plan to reduce GHG emissions, and as described in the previous response, emissions would not exceed the thresholds. Therefore, implementation of the Project would not conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases and impacts would be less than significant

**Existing Plans, Programs, or Policies**

See (b) above for applicable regulations.

**Mitigation Measures**

No mitigation measures related to greenhouse gas emissions are required.

**Sources**

Urban Crossroads. Ethanac and Barnett Greenhouse Gas Impact Analysis (Urban Crossroads 2022d) (See Appendix H).

South Coast Air Quality Management District Draft Guidance Document – Interim CEQA Greenhouse Gas Significance Thresholds (SCAQMD 2008). Accessed: [http://www.aqmd.gov/docs/defaultsource/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significancethresholds/ghgattachmente.pdf](http://www.aqmd.gov/docs/defaultsource/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significancethresholds/ghgattachmente.pdf)



	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>9. HAZARDS AND HAZARDOUS MATERIALS.</b> Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The discussion below is based on the Phase I Environmental Assessment, prepared by AEI Consultants, June 2, 2021 (AEI 2021) and the Limited Phase II Subsurface Investigation, prepared by AEI Consultants, July 6, 2022 (AEI 2022) (Appendices H and I).

**a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

**Less than Significant Impact.** A hazardous material is defined as any material that, due to its quantity, concentration, or physical or chemical characteristics, poses a significant present or



potential hazard to human health and safety or to environment if released into the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous wastes, and any material that regulatory agencies have a reasonable basis for believing would be injuries to the health and safety of persons or harmful to the environment if released into the home, workplace, or environment. Hazardous wastes require special handling and disposal because of their potential to damage public health and the environment.

There are multiple state and local laws that regulate the storage, use, and disposal of hazardous materials. The Riverside County Department of Environmental Health Hazardous Materials Branch is the local administrative agency that coordinates regulatory programs that regulate use, storage, and handling of hazardous materials, including Hazardous Materials Business Plans. As required by the County's standard conditions of approval, should tenants of the proposed building utilize or transport hazardous materials, the tenant/business would also be required to comply with Riverside County Department of Environmental Health conditions, and if required, the California Accidental Release Program (CalARP). CalARP would require the tenant to provide a Risk Management Plan and allow site access for routine inspections of CalARP facilities.

### **Construction**

The proposed construction activities would involve the transport, use, and disposal of hazardous materials such as paints, solvents, oils, grease, and caulking. In addition, hazardous materials would be needed for fueling and servicing construction equipment on the site. These types of materials are not acutely hazardous, and all storage, handling, use, and disposal of these materials are regulated by federal and state requirements, which the Project construction activities are required to strictly adhere to. These regulations include: the federal Occupational Safety and Health Act and Hazardous Materials Transportation Act; Title 8 of the California Code of Regulations (CalOSHA), and the state Unified Hazardous Waste and Hazardous Materials Management Regulatory Program. As a result, routine transport and use of hazardous materials during construction would be less than significant.

### **Operation**

Operations of the proposed Project would include warehousing and manufacturing activities, which generally use limited hazardous materials, such as: cleaning agents, paints, pesticides, batteries, and aerosol cans. Normal routine use of these products would not result in a significant hazard to residents or workers in the vicinity of the Project.

Also, should any future business that occupies the proposed building handle acutely hazardous materials (as defined in Section 25500 of California Health and Safety Code, Division 20, Chapter 6.95) the business would require a permit from the Riverside County Department of Environmental Health Hazardous Materials Branch. Such businesses are also required to comply with California's Hazardous Materials Release Response Plans and Inventory Law, which requires immediate reporting to the County Hazardous Materials Branch and the State Office of Emergency Services regarding any release or threatened release of a hazardous material, regardless of the amount handled by the business. In addition, any business handling at any one time, greater than 500 pounds of solid, 55 gallons of liquid, or 200 cubic feet of gaseous hazardous material, is required, under Assembly Bill 2185 (AB 2185), to file a Hazardous Materials Business Emergency Plan with the County. A Hazardous Materials Business Emergency Plan is a written set of procedures and information created to help minimize the effects and extent of a release or threatened release of a hazardous material. The intent of the Hazardous Materials Business Emergency Plan is to satisfy federal and state right-to-know laws and to provide detailed information for use by emergency responders.



Therefore, if future businesses that use or store hazardous materials occupy the proposed building, the business owners and operators would be required to comply with all applicable federal, state, and local regulations, as permitted by the County Department of Environmental Health Hazardous Materials Branch to ensure proper use, storage, and disposal of hazardous substances. Overall, operation of the proposed Project would result in a less than significant impact related to the routine transport, use, or disposal of hazardous materials.

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

**Less than Significant Impact.** Less than Significant Impact. In 2021 a Phase I Environmental Site Assessment (ESA) was conducted for the Project site by AEI Consultants (AEI 2021). The Phase I ESA did not identify any recognized environmental conditions (RECs), controlled RECs, or historic RECs.

The Phase I ESA identified that the site was historically used for agricultural purposes. As such, there is potential that agricultural chemicals, such as pesticides, herbicides, and fertilizers were used on site and traces of such chemicals may still be present. A Phase II Limited Subsurface Investigation was conducted to assess site soils to determine if agricultural chemicals are present. Seven shallow soil composites soil samples and one duplicate composite soil sample were collected and analyzed for OCPs and chlorinated herbicides. Additionally, eight samples were analyzed for arsenic. The results of the soil sampling detected Dichlorodiphenyldichloroethane (DDE) with a maximum concentration of 0.0193 mg/kg and 4,4'-DDE with a maximum concentration of 0.0069 mg/kg. Given a maximum dilution of 4:1 based on composite sampling, these concentrations are below their respective residential environmental screening levels. No other organochlorine pesticides (OCPs) and chlorinated herbicides were detected in the soil samples collected and analyzed above their respective laboratory method detection limits. Arsenic was not detected at concentrations above the maximum background concentration of 11.0 mg/kg in the soil samples collected at the site. Based on the results of the Phase II Investigation, no further analysis is warranted (AEI 2022).

**Construction**

As described previously, construction of the proposed Project would involve the limited use and disposal of hazardous materials. Equipment that would be used in construction of the Project has the potential to release gas, oils, greases, solvents; and spills of paint and other finishing substances. However, the amount of hazardous materials onsite would be limited, and construction activities would be required to adhere to all applicable regulations regarding hazardous materials storage and handling, as well as to implement construction BMPs (through implementation of a required SWPPP implemented by County conditions of approval, and included as PPP HYD-1) to prevent a hazardous materials release and to promptly contain and clean up any spills, which would minimize the potential for harmful exposures. With compliance to existing laws and regulations, which is mandated by the County through construction permitting, the Project's construction-related impacts would be less than significant.

**Accidental Releases.** The routine use, storage, transport, and disposal of hazardous materials in accordance with applicable regulations during construction activities would not pose health risks or result in significant impacts. To avoid an impact related to an accidental release, the use of best management practices (BMPs) during construction are implemented as part of a SWPPP as required by the National Pollution Discharge Elimination System General Construction Permit (and included as PPP HYD-1). Implementation of an SWPPP would minimize potential adverse effects to workers,



the public, and the environment. Construction contract specifications would include strict on-site handling rules and BMPs that include, but are not limited to:

- Establishing a dedicated area for fuel storage and refueling and construction dewatering activities that includes secondary containment protection measures and spill control supplies;
- Following manufacturers' recommendations on the use, storage, and disposal of chemical products used in construction;
- Avoiding overtopping construction equipment fuel tanks;
- Properly containing and removing grease and oils during routine maintenance of equipment; and
- Properly disposing of discarded containers of fuels and other chemicals.

### **Operation**

As described above, the risks related to upset or accident conditions involving the release of hazardous materials into the environment would be adequately addressed through compliance with existing federal, state, and local regulations. Development of the proposed Project would result in various limited warehousing and manufacturing uses that would use and store common hazardous materials such as paints, solvents, and cleaning products. Also, building mechanical systems and grounds and landscape maintenance could also use a variety of products formulated with hazardous materials, including fuels, cleaners, lubricants, adhesives, sealers, and pesticides/herbicides.

The environmental and health effects of different chemicals are unique to each chemical and depend on the extent to which an individual is exposed. The extent and exposure of individuals to hazardous materials would be limited by the relatively small quantities of these materials that would be stored, used, and handled. Additionally, any business or facility which uses, generates, processes, produces, packages, treats, stores, emits, discharges, or disposes of hazardous material (or waste) would require a hazardous materials handler permit from the Riverside County Department of Environmental Health Hazardous Materials Division, as described previously.

Through existing City and County Health Hazardous Materials Division permitting and occupancy procedures, hazardous materials would be used and stored in accordance with applicable regulations and such uses would be required to comply with federal and state laws to reduce the potential consequences of hazardous materials accidents. In addition, a Water Quality Management Plan (WQMP) is required to be implemented for the Project (as further discussed in Section 10, *Hydrology and Water Quality*, and included as PPP WQ-2). The BMPs that would be implemented as part of the plan and would protect human health and the environment should any accidental spills or releases of hazardous materials occur during operation of the Project.

As a result, implementation of the proposed Project would not result in a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, and operational impacts would be less than significant.



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

**No Impact.** There are no existing or proposed schools within 0.25 mile of the Project site. The closest school to the Project site is Romoland Elementary School which is located approximately 1.35 miles east at 25890 Antelope Rd, Romoland, CA 92585.

Thus, the Project would not emit hazardous or handle acutely hazardous materials, substances, or waste near a school, and there would be no impact.

**d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

**No Impact.** According to the California Department of Toxic Substances Control EnviroStor listing and the Phase I ESA, the Project site is not located on any hazardous material sites listed, pursuant to Government Code Section 65962.5. As a result, impacts related to hazards from being located on or adjacent to a hazardous materials site are unlikely to occur from implementation of the proposed Project and there would be no impact..

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

**No Impact.** Perris Valley Airport is located approximately 2.14 miles northwest of the Project site. According to the Riverside County Airport Land Use Compatibility Plan Policy Document, the Project site is not located within the Perris Valley Airport Compatibility Zone, nor is it within the Airspace Protection Zone (Riverside County Airport Land Use Commission 2011). The entire Project Site is located in a compatibility zone (Zone E) for the March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan (ALUC). Within Compatibility Zone E, general plan amendments (as well as other discretionary actions, such as rezoning, subdivision approvals, use permits, and etc.) that would convert land to residential use or increase the density of residential uses should be subject to careful consideration of overflight impacts. Other considerations in Zone D include the height of proposed buildings, antennas, or other structures. Additionally, the Project site is not within the 65 dB CNEL contour map. The proposed height of the Project would not exceed the 100-foot maximum height allowed in the Economic Development Corridor - Northern Gateway (EDC-NG) zone. Thus, there would be no conflicts between Perris Valley Airport aircraft activities and the Project. Therefore, the Project would not result in a safety hazard for people residing or working in the Project areas, and no impacts would occur.

**f) Impair implementation of an adopted emergency response plan or emergency evacuation plan?**

**Less than Significant Impact.**

**Construction**

The proposed construction activities, including equipment and supply staging and storage, would occur within the Project site and would not restrict access of emergency vehicles to the Project site or adjacent areas. During construction of the Project driveways, Ethanac Road and Barnett Road would remain open to ensure adequate emergency access to the Project area and vicinity. Impacts



related to interference with an adopted emergency response or evacuation plan during construction activities would be less than significant.

### **Operation**

Operation of the proposed Project would not result in a physical interference with an emergency response evacuation. Direct access to the Project site would be provided via four driveways, three off Barnett Road and one off Ethanac Road, which are adjacent to the Project site. The Project is also required to design and construct internal access and provide fire suppression facilities (e.g., hydrants and sprinklers) in conformance with the City's Municipal Code and the Fire Department prior to approval to ensure adequate emergency access pursuant to the requirements in Section 503 of the California Fire Code (Title 24, California Code of Regulations, Part 9) and the Fire Code included per Chapter 8.20 of the Menifee Code of Ordinances. As a result, the proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, and impacts would be less than significant.

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

**No Impact.** According to the CALFIRE Fire Hazard Severity Zone map, the Project site is not within an area identified as a Very High Fire Hazard Severity Zone (VFHSZ) (CALFIRE 2022). Thus, the Project would not result in impacts related to the exposure of people or structures to loss, injury, or death involving wildland fires.

### **Existing Plans, Programs, or Policies**

There are no impact reducing Plans, Programs, or Policies related to hazards and hazardous material that are applicable to the Project.

### **Mitigation Measures**

No mitigation measures related to hazards and hazardous materials are required.

### **Sources**

AEI Consultant. Phase 1 Environmental Site Assessment, June 2, 2021 (AEI 2021). (See Appendix I)

AEI Consultants. Limited Phase II Subsurface Investigation, July 6, 2022 (AEI 2022). (See Appendix J)

CalFire Office of the State Fire Marshal. Fire Hazard Severity Zones Map. Available at: <https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/>

Riverside County Airport Land Use Commission. Perris Valley Airport Land Use Compatibility Plan. March 2011. Available at: [https://www.rcaluc.org/Portals/13/19%20-%20Vol.%201%20Perris%20Valley%20\(Final-Mar.2011\).pdf?ver=2016-08-15-155627-183](https://www.rcaluc.org/Portals/13/19%20-%20Vol.%201%20Perris%20Valley%20(Final-Mar.2011).pdf?ver=2016-08-15-155627-183)



	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>10. HYDROLOGY AND WATER QUALITY.</b> Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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



**Less Than Significant Impact.****Construction**

Construction of the Project would require grading and excavation of soils, which would loosen sediment, and then have the potential to mix with surface water runoff and degrade water quality. Additionally, construction would require the use of heavy equipment and construction-related chemicals, such as concrete, cement, asphalt, fuels, oils, antifreeze, transmission fluid, grease, solvents and paints. These potentially harmful materials could be accidentally spilled or improperly disposed of during construction and, if mixed with surface water runoff, could wash into and pollute waters.

These types of water quality impacts during construction of the Project would be prevented through implementation of a stormwater pollution prevention plan (SWPPP). Construction of the Project would disturb more than one acre of soil; therefore, the proposed Project would be required to obtain coverage under the NPDES General Permit for Discharges of Storm Water Associated with Construction Activity. Construction activity subject to this permit includes clearing, grading, and ground disturbances such as trenching, stockpiling, or excavation. The Construction General Permit requires implementation of a SWPPP that is required to identify all potential sources of pollution that are reasonably expected to affect the quality of storm water discharges from the construction site. The SWPPP would generally contain a site map showing the construction perimeter, proposed buildings, stormwater collection and discharge points, general pre- and post-construction topography, drainage patterns across the site, and adjacent roadways. The SWPPP would also include construction BMPs.

Adherence to the existing requirements and implementation of the appropriate BMPs as ensured through the City's plan check and permitting process are included as PPP WQ-1, which would ensure that the Project would not violate any water quality standards or waste discharge requirements, potential water quality degradation associated with construction activities would be minimized, and impacts would be less than significant.

**Operation**

The Project proposes operation of new industrial buildings, which would introduce the potential for pollutants such as, chemicals from household cleaners, nutrients from fertilizer, pesticides and sediments from landscaping, trash and debris, and oil and grease from vehicles. These pollutants could potentially discharge into surface waters and result in degradation of water quality. Thus, the Project would be required to comply with existing regulations that limit the potential for pollutants to discharge from the site.

Section 8.26.050 of the City's Municipal Code (and PPP WQ-2) requires a Water Quality Management Plan (WQMP) if grading is proposed as part of the Project. The BMPs in the WQMP would include pollutant source control features and pollutant treatment control features.

The Project would provide frontage street improvements along Barnett Road and Ethanac Road. Stormwater quality treatment control BMPs and storm drain facilities would be implemented as part of the frontage street improvements.

Runoff from the site generally sheet flows in a westerly direction towards an existing flood control master drainage plan (MDP) channel (a.k.a. Romoland Line A). The Project would implement three modular wetland systems (MWS) along the westerly edge of the Project site. The proposed system would be an "off-line system," meaning there would be a low-flow diversion pipe (from the mainline storm drain system) into the proposed MWS, while the excess flows (above the water quality low-



flows) would bypass the MWS and outlet to the MDP Romoland Line A channel. Additionally, landscaping would be provided throughout the Project site. Where applicable, runoff from paved area would be directed towards landscape area in an effort to promote incidental infiltration and preserve the infiltration capacity of the Project site.

Stormwater quality treatment control Best Management Practices (BMPs) and storm drain facilities would be implemented as part of the frontage street improvements along Ethanac Road and Barnett Road, and runoff would discharge into the existing MDP Romoland Line A channel. In order to convey the flows from portions of Barnett Road and offsite parcels east of Barnett Road, a connector storm drain pipe would be provided along Barnett Road. The downstream MDP Line A-13 was recently approved by Riverside Flood Control and Water Conservation District (RCFC & WCD) and is anticipated to be constructed by others in 2022. Run-on from parcels northeast and southeast of the Project site would be conveyed via “bypass” storm drain facilities (one near the northerly edge and the other one near the southeasterly edge) towards the existing MDP Romoland Line A Channel.

Regional Board Order No. R8-2010-0033 for the Santa Ana Region requires the Project to infiltrate, evapotranspire, or biotreat/biofilter the 85th percentile 24-hour storm event. However, if compliance is not feasible, a project must be designed to maximize retention and pollutant removal. Due to poor infiltration of the Project site, infiltration of the specified design storm would not be feasible. Therefore, where applicable, runoff from the proposed hardscape areas would be directed towards landscape area in an effort to maximize incidental infiltration and preserve the infiltration capacity. Proprietary Modular Wetland Systems (MWS) are proposed for the Project, which would treat the stormwater low-flows to maximize pollutant removal. Runoff from the site will ultimately drain to Canyon Lake and Lake Elsinore (where “highest and best use” are considered).

With implementation of the WQMP, pursuant to the City Municipal Code, (included as PPP WQ-2); which would be verified during the plan check and permitting process for the proposed Project, potential pollutants would be reduced to the maximum extent feasible, and development of the proposed Project would not violate any water quality standards or waste discharge requirements, and impacts would be less than significant.

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

**Less Than Significant Impact.** The City is served by the Eastern Municipal Water District (EMWD) for water and sewer. Groundwater is pumped from the Hemet/San Jacinto and West San Jacinto areas of the San Jacinto Groundwater Basin for EMWD supply. As discussed in Section 19, Utilities and Services, the Project would be consistent with planned future water demand for the EMWD as outlined in the 2020 Urban Water Management Plan (UWMP). The EMWD is anticipated to have sufficient water resources to meet customer demand into the future, as well as during multiple dry years. Thus, the proposed Project would not result in the lowering of the local groundwater table, and impacts would be less than significant.

As described above, existing soils of the Project site greatly limit groundwater infiltration due to their poor drainage properties. Development of the Project site would increase impervious surface area of the Project site. However, development of the Project site would have a negligible impact on groundwater infiltration rates. Therefore, the Project would result in a less than significant impact on groundwater recharge.



- c) **Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:**

- i. **Result in substantial erosion or siltation on- or off-site;**

**Less Than Significant Impact.** The Project site is adjacent to an open drainage channel. The Project would require an encroachment permit to install storm drain outlets along the channel that connect to the Project site. However, as specified in the Project's Preliminary WQMP and Drainage Report (see Appendices J and K), proposed drainage improvements would maintain existing drainage patterns of the Project site. Thus, impacts related to alteration of the course of a stream or river would be less than significant.

**Construction**

Construction of the Project would require grading and excavation of soils, which would loosen sediment and could result in erosion or siltation. However, as described previously, construction of the proposed Project requires City approval of a SWPPP prepared by a Qualified SWPPP Developer, as included by PPP WQ-1. The SWPPP is required during the City's plan check and permitting process and would include construction BMPs to reduce erosion or siltation. Typical BMPs for erosion or siltation, include use of silt fencing, fiber rolls, gravel bags, stabilized construction driveway, and stockpile management (as described in the previous above). Adherence to the existing requirements and implementation of the required BMPs per the plan check and permitting process would ensure that erosion and siltation associated with construction activities would be minimized, and impacts would be less than significant.

**Operation**

The Project site proposes construction of two industrial buildings that would add a total of 251,133 SF of impervious surfaces. Pervious areas onsite would be landscaped and would not generate soils that could erode. The remaining area would be paved or developed and would not be susceptible to erosion. Also, as described previously, the City requires the Project to implement a WQMP (as included by PPP WQ-2) that would implement BMPs, which would capture loose sediments and prevent siltation. As a result, stormwater runoff and the potential for erosion and siltation would not increase with implementation of the proposed Project. Therefore, the proposed Project would not alter the existing drainage pattern in the Project area and would not result in substantial erosion or siltation on- or off-site. Impacts would be less than significant.

- ii. **Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;**

**Less Than Significant Impact.** The proposed Project would be required to implement a SWPPP (included as PPP WQ-1) during construction that would implement BMPs, such as the use of silt fencing, fiber rolls, and gravel bags, that would ensure that runoff would not substantially increase during construction, and flooding on or off-site would not occur. As described in the previous response, the Project would discharge to the adjacent stormwater channel that flows to the west of the Project site. Additionally, the Project would include construction of a new 36-inch storm drain in Barnett Road to connect to new drains currently under construction to the south along the same alignment.



Stormwater infiltration would be maximized by diverting flows to landscaped areas wherever feasible. The Project site does not contain favorable conditions for stormwater infiltration due to poor drainage capabilities. Therefore, post-construction BMPs would not capture the design storm volumes specified by the Santa Ana Region stormwater permit. However, the existing storm channel and proposed storm drain would have sufficient capacity to accommodate the additional flows that would result from the Project. Additionally, the Project would implement sufficient storm drain inlets and connectors to prevent any impacts to ponding or inundation onsite, upstream, downstream, or on neighboring parcels, as exhibited through the Project Preliminary WQMP (see Appendix K). Project stormwater system design would be checked and approved by the City prior to approval of the Project. Thus, operation of the proposed Project would not substantially increase stormwater runoff, and impacts related to flooding on or off-site would be less than significant.

**iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or**

**Less Than Significant Impact.** As described in the previous responses, the proposed Project would be required to implement a SWPPP (included as PPP WQ-1) during construction that would implement BMPs, including dry wells which would be used to infiltrate runoff from the site back into the ground. Therefore, pollutants would not discharge from the Project site, which would reduce potential impacts to drainage systems and water quality to a less than significant level.

Also, the Project would implement an operational WQMP (included as PPP WQ-2) that would install MWS where runoff would be captured and piped to the adjacent flood control channel. Implementation of MWS would remove potential pollutant loads from the Project drainage area and maximize treatment of the captured stormwater runoff. As described above, existing and proposed stormwater infrastructure would have sufficient capacity to accommodate the proposed development. Impacts related to drainage systems and polluted runoff would be less than significant with implementation of the existing requirements, which would be verified during the plan check and permitting process.

**iv. Impede or redirect flood flows?**

**Less Than Significant Impact.** The Project site is shown on the FEMA Flood Insurance Rate Map (FIRM) number 06065C2055H, effective August 18, 2014. Based on the FIRM, the Project site, including the drainage channel around the Project site, has been identified as within flood zone “Zone A.” However, based on Project coordination with the Riverside County Flood Control and Water Conservation District (RCFC & WCD), it is understood that the Project site has been removed from the Zone A floodplain designation due to dredging of the adjacent channel (Line A) to its ultimate depth, and is currently being reviewed by FEMA for approval. The Project site is anticipated to be outside of a 100-year flood zone. Thus, the proposed Project would not impede or redirect flood flows, and impacts would not occur.



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

**No Impact.** A seiche is a surface wave created when an inland body of water is shaken, usually by earthquake activity. The site also is not subject to flooding hazards associated with a seiche because there are no large body of surface water located near the Project site to result in effects related to a seiche, which could result in release in pollutants due to inundation of the site.

The Pacific Ocean is located over 30 miles southwest of the Project site; consequently, there is no potential for the Project site to be inundated by a tsunami that could release pollutants. In addition, the Project site is flat and not located near any steep hillsides; therefore, there is no potential for the site to be adversely affected by mudflow. Thus, implementation of the proposed Project would not expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow that could release pollutants due to inundation of the Project site. No impact would occur.

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

**No Impact.** As described previously, the Project would be required to have an approved SWPPP, which would include construction BMPs to minimize the potential for construction related sources of pollution. For operations, the proposed Project would be required to implement source control BMPs to minimize the introduction of pollutants; and treatment control BMPs to treat runoff. With implementation of the operational source and treatment control BMPs that would be required by the City during the Project permitting and approval process (pursuant to PPP WQ-1 and PPP WQ-2), potential pollutants would be reduced to the maximum extent feasible, and implementation of the proposed Project would not obstruct implementation of a water quality control plan.

As described previously, water supplies are provided by the EMWD extract groundwater from the West San Jacinto Basin and the Hemet/San Jacinto Basin of the San Jacinto Groundwater Basin. EMWD is the acting Groundwater Sustainability Agency (GSA) for the non-adjudicated portions of the San Jacinto Groundwater Basin and have developed a Groundwater Sustainability Plan (GSP) in compliance with the 2014 Sustainable Groundwater Management Act (SGMA). The West San Jacinto Basin is now governed by the GSP. The Hemet/San Jacinto (HSJ) Management Plan is implemented by the Hemet-San Jacinto Watermaster (Watermaster). GSPs developed by respective agencies plan for the sustainable pumping and recharge of groundwater resources. EWMD has determined that it will have sufficient water supplies to accommodate future anticipated water demands, which includes the Project. Additionally, the GSPs include alternatives to assure reliability including an Integrated Recharge and Recovery Program (IRRP), filtration plants to treat and deliver imported water to areas dependent on groundwater, and recycled water use for irrigation of landscape and agriculture. EMWD has also initiated several other conservation programs to prevent overdraft of groundwater resources and depletion of basins. Thus, the proposed Project would not result in the lowering of the local groundwater table, and impacts would not occur.

**Existing Plans, Programs, or Policies**

**PPP WQ-1: SWPPP.** Prior to grading permit issuance, the Project developer shall have a Stormwater Pollution Prevention Plan (SWPPP) prepared by a QSD (Qualified SWPPP Developer) in accordance with the City's Municipal Code Chapter 15.01 Storm Water/Urban Runoff and the



Santa Ana RWQCB NPDES Storm Water Permit Regional Board Order No. R8-2010-0033. The SWPPP shall incorporate all necessary BMPs and other NPDES regulations to limit the potential of erosion and polluted runoff during construction activities. Project contractors shall be required to ensure compliance with the SWPPP and permit periodic inspection of the construction site by Menifee staff or its designee to confirm compliance.

**PPP WQ-2: Water Quality Management Plan.** Prior to grading permit issuance, the Project applicant shall have a Water Quality Management Plan (WQMP) approved by the City for implementation. The Project shall comply with the City's Municipal Section 8.26.050 and the Municipal Separate Storm Sewer System (MS4) permit requirements in effect for the Regional Water Quality Control Board (RWQCB) at the time of grading permit to control discharges of sediments and other pollutants during operations of the Project.

### **Mitigation Measures**

No mitigation measures related to hydrology and water quality are required.

### **Sources**

Federal Emergency Management Agency (FEMA). August 8, 2014. National Flood Hazard Layer (NFHL) Map #06065C2055H. Available at: <https://www.fema.gov/flood-maps>

SDH & Associates, Inc. Preliminary Water Quality Management Plan for Phelan-Barnett (WQMP 2022). (See Appendix K)

SDH & Associates, Inc. Preliminary Drainage Study for Phelan-Barnett (Drainage Study 2022). (See Appendix L)



	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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**11. LAND USE AND PLANNING.** Would the project:

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Physically divide an established community?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**a) Physically divide an established community?**

**No Impact.** The physical division of an established community could occur if a major road were built through an established community or neighborhood, or if a major development was built which was inconsistent with the land uses in the community such that it divided the community. The environmental effects caused by such could include lack of a, or disruption of, access to services, schools, or shopping areas. It could also include the creation of blighted buildings or areas due to the division of the community.

The proposed Project would develop vacant and undeveloped site with two new industrial warehouse buildings in a developing area that is surrounded by vacant land, farmland, and commercial uses. The Project does not include the construction of a new road or the implementation of an inconsistent land use into the Project's vicinity. Therefore, no impact would occur.

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

**No Impact.** The Project site has a General Plan designation of Economic Development Corridor (EDC) and is zoned Economic Development Corridor – Northern Gateway (EDC-NG). The proposed Project would develop a vacant and undeveloped site with two new warehouse buildings whose tenants would need to be consistent with the EDC-NG zone land uses. Additionally, the City's plan check and permitting process would ensure that the Project complies with the applicable zoning and the City's Development Code requirements. Thus, impacts related to conflict with a policy adopted for the purpose of avoiding or mitigating an environmental effect would not occur.

**Table LU- 1. Land Use Consistency**

Land Use Goal or Policy	Project Consistency
Goal LU-1: Land Uses and building types that result in a community where residents at all stages of life, employers, workers, and visitors have a diversity of options of where they can live, work, shop and recreate within Menifee.	<b>Consistent.</b> The Project proposes to construct a warehouse facility that would provide an opportunity for new employment in Menifee.
Policy LU-1.5: Support development and land use patterns, where appropriate, that reduce reliance on the automobile and capitalize on multimodal transportation opportunities.	<b>Consistent.</b> The Project site is in an area designated for industrial land use per the City's General Plan and zoning map. The Project would include sidewalks and a



	bike lane along Barnett Road. Bicycle parking would also be provided on site, as well as vanpool parking.
Policy LU-1.8: Ensure new development is carefully designed to avoid or incorporate natural features, including washes, creeks, and hillsides.	<b>Consistent.</b> As discussed in Section 5.4, Biological Resources, no natural features, including washes, creeks, or hillsides exist on the Project site. Therefore, the Project would not impact natural features.
Policy LU-1.10: Buffer sensitive land uses, such as residences, schools, care facilities, and recreation areas from major air pollutant emission sources, including freeways, manufacturing, hazardous materials storage, and similar uses.	<b>Consistent.</b> As discussed in Section 3.0, Project Description, the Project site is surrounded by vacant land and commercial uses. The proposed warehouses would include a landscaped buffer along Barnett Road as well as including landscaping around the perimeter of the site so as to screen warehouse activities from adjacent uses.
Goal LU-3: A full range of public utilities and related services that provide for the immediate and long-term needs of the community.	<b>Consistent.</b> As described in Section 5.19, Utilities and Service Systems, the Project would be adequately served by existing utility infrastructure.
Policy LU-3.4: Require that approval of new development be contingent upon the project's ability to secure appropriate infrastructure services.	<b>Consistent.</b> As described in Section 5.19, Utilities and Service Systems, the Project would be adequately served by existing utility infrastructure.
Goal EJ-3: Encourage community health best practices, diversity in housing, and strong public engagement.	<b>Not Applicable.</b> The proposed Project would not interfere with the City's ability to encourage community health best practices, diversity in housing, and strong public engagement.
Policy EJ 3.4: Establish the community's trust by holding open meetings available to any community member to attend and participate. The City will proactively and meaningfully engage residents in planning decisions that impact their housing and neighborhoods through these public meetings.	<b>Not Applicable.</b> The proposed Project would not interfere with the City's ability to conduct meaningful public engagement. As part of the Project approval process, public engagement will be conducted through the public review process for the CEQA document and at Project hearings conducted by the City.
Goal C-1: A roadway network that meets the circulation needs of all residents, employees, and visitors to the City of Menifee.	<b>Not Applicable.</b> The proposed Project would not interfere with the City's roadway network. The project would improve the roadway network by constructing the required frontage improvements along Barnett Road and Ethanac Road.
Policy C-1.1: Require roadways to: <ul style="list-style-type: none"> <li>• Comply with federal, state, and local design and safety standards.</li> <li>• Meet the needs of multiple transportation modes and users.</li> <li>• Be compatible with the streetscape and surrounding land uses.</li> <li>• Be maintained in accordance with best practices.</li> </ul>	<b>Consistent.</b> The Project's proposed internal drive aisles would be designed in accordance City specifications and would be reviewed by the City prior to Project approval. The project would improve the roadway network by constructing the required frontage improvements along Barnett Road and Ethanac Road.
Policy C-1.2: Require development to mitigate its traffic impacts and achieve a peak hour Level of Service (LOS) D or better at intersections, except at constrained intersections at close proximity to the I-215 where LOS E may be permitted.	<b>Consistent.</b> As discussed in Section 5.17, Transportation, the Project would not result in impacts related to roadway capacity.
Policy C-1.5: Minimize idling times and vehicle miles traveled to conserve resources, protect air quality, and limit greenhouse gas emissions.	<b>Consistent.</b> As discussed in Section 5.6, Energy, the Project would adhere to City of Menifee Industrial Good Neighbor Policies, that limits idling times to no more than 3 minutes, which would preclude unnecessary and wasteful consumption of fuel due to unproductive idling of trucks.
Goal C-2: A bikeway and community pedestrian network that facilitates and encourages nonmotorized travel throughout the City of Menifee.	<b>Consistent.</b> The Project would install sidewalks along its Barnett Road frontage which will promote the use of nonmotorized travel throughout Menifee.
Policy C-2.3: Require walkways that promote safe and convenient travel between residential areas, businesses,	<b>Consistent.</b> The Project would install sidewalks along its Barnett Road frontage which will promote safe and convenient travel between adjacent uses.



schools, parks, recreation areas, transit facilities, and other key destination points.t	
Goal C-3: A public transit system that is a viable alternative to automobile travel and meets basic transportation needs of the transit dependent.	<b>Not Applicable.</b> The proposed Project would not interfere with the City's public transport system.
Goal C-5: An efficient flow of goods through the city that maximizes economic benefits and minimizes negative impacts.	<b>Consistent.</b> The Project would provide two warehouses to facilitate regional movement of goods.
Policy C-5.1: Designate and maintain a network of city truck routes that provides for the effective transport of goods while minimizing negative impacts on local circulation and noise-sensitive land uses.	<b>Consistent.</b> The Project would provide utilize the City's existing network of truck routes to facilitate regional movement of goods.
Goal OSC-5: Archaeological, historical, and cultural resources are protected and integrated into the city's built environment.	<b>Consistent.</b> A Phase I Cultural Resources Assessment was conducted for the proposed Project and determined the Project would not impact any archaeological and/or historic resources.
Policy OCS-5.1: Preserve and protect archaeological and historic resources and cultural sites, places, districts, structures, landforms, objects and native burial sites, traditional cultural landscapes and other features, consistent with state law and any laws, regulations or policies which may be adopted by the city to implement this goal and associated policies.	<b>Consistent.</b> A Phase I Cultural Resources Assessment was conducted for the proposed Project and determined the Project would not impact any archaeological and/or historic resources.
Policy OCS-5.3: Preserve sacred sites identified in consultation with the appropriate Native American tribes whose ancestral territories are within the city, such as Native American burial locations, by avoiding activities that would negatively impact the sites, while maintaining the confidentiality of the location and nature of the sacred site.	<b>Consistent.</b> As discussed in Section 5.18, Tribal Cultural Resources, the Project site does not contain known tribal cultural resources.
Policy OCS-5.4: Establish clear and responsible policies and best practices to identify, evaluate, and protect previously unknown archaeological, historic, and cultural resources, following applicable CEQA and NEPA procedures and in consultation with the appropriate Native American tribes who have ancestral lands within the city.	<b>Consistent.</b> A Phase I Cultural Resources Assessment was conducted for the proposed Project and determined the Project would not impact any archaeological and/or historic resources.
Policy OCS-5.5: Develop clear policies regarding the preservation and avoidance of cultural resources located within the city, in consultation with the appropriate Native American tribes who have ancestral lands within the city	<b>Consistent.</b> As discussed in Section 5.18, Tribal Cultural Resources, the Project site does not contain known tribal cultural resources.
Goal OSC-7: A reliable and safe water supply that effectively meets current and future user demands.	<b>Consistent.</b> As discussed in Section 5.19, Utilities and Service Systems, the Project site would be adequately served by EMWD's existing water supply.
Policy OCS-7.2: Encourage water conservation as a means of preserving water resources.	<b>Consistent.</b> Landscaping would be comprised of drought-tolerant shrubs and ground cover and evergreen and deciduous trees. The landscape plan shall comply with city of Menifee, landscape water use efficiency requirements 15.04; landscaping standards; mmc 9.195; and state of California AB 1881, Water Conservation in Landscaping Act (2015).
Policy OCS-7.9: Ensure that high quality potable water resources continue to be available by managing stormwater runoff, wellhead protection, and other sources of pollutants.	<b>Consistent.</b> As discussed in Section 5.10, Hydrology, the proposed Project would be required to implement a SWPPP (included as PPP WQ-1) during construction that would implement BMPs, such as the use of silt fencing, fiber rolls, and gravel bags, that would ensure that runoff would not substantially increase during construction, and flooding on or off-site would not occur.



Policy OCS-7.10: Preserve natural floodplains, including Salt Creek, Ethanac Wash, Paloma Wash, and Warm Springs Creek, to facilitate water percolation, replenishment of the natural aquifer, proper drainage, and prevention of flood damage.	<b>Consistent.</b> As discussed in Section 5.10, Hydrology, the proposed Project would be required to implement a SWPPP (included as PPP WQ-1) during construction that would implement BMPs, such as the use of silt fencing, fiber rolls, and gravel bags, that would ensure that runoff would not substantially increase during construction, and flooding on or off-site would not occur. Additionally, the project would implement a WQMP (included as PPP WQ-2). The BMPs in the WQMP would include pollutant source control features and pollutant treatment control features. Implementation of PPP WQ-1 and WQ-2 would help to preserve natural floodplains.
Goal OSC-8: Protected biological resources, especially sensitive and special status wildlife species and their natural habitats.	<b>Consistent.</b> As discussed in Section 5.4, Biological Resources, the field survey conducted as part of the General Biological Assessment did not identify suitable habitat onsite for any sensitive plant species and did not identify suitable habitat for any sensitive animal species, except the burrowing owl. As such, the Project would implement Mitigation Measure BIO-1 which requires burrowing owl preconstruction surveys to be conducted 30-days prior to construction activities. Additionally, the Project would implement Mitigation Measure BIO-2 which would ensure MBTA compliance and would require a nesting bird survey to be conducted prior to the commencement of construction during nesting season, which would reduce potential impacts related to nesting avian species and native wildlife nursery sites to a less than significant level.
Policy OCS-8.1: Work to implement the Western Riverside County Multiple Species Habitat Conservation Plan in coordination with the Regional Conservation Authority	<b>Consistent.</b> As discussed in Section 5.4, Biological Resources, implementation of the proposed Project would not conflict with the MSHCP
Policy OCS-8.2: Support local and regional efforts to evaluate, acquire, and protect natural habitats for sensitive, threatened, and endangered species occurring in and around the city.	<b>Consistent.</b> As discussed above, the Project would implement Mitigation Measures BIO-1 and BIO-2 to reduce impacts to burrowing owls and nesting birds to a less than significant level.
Policy OCS-8.5: Recognize the impacts new development will have on the city's natural resources and identify ways to reduce these impacts.	<b>Consistent.</b> As discussed above, the Project would implement Mitigation Measures BIO-1 and BIO-2 to reduce impacts to burrowing owls and nesting birds to a less than significant level.
Policy OCS-8.8: Implement and follow MSHCP goals and policies when making discretionary actions pursuant to Section 13 of the Implementing Agreement.	<b>Consistent.</b> As discussed in Section 5.4, Biological Resources, implementation of the proposed Project would not conflict with the MSHCP
Goal OSC-9: Reduced impacts to air quality at the local level by minimizing pollution and particulate matter	<b>Consistent.</b> As discussed in Section 5.3, Air Quality, the Project would not result in a significant impact related to air quality.
Policy OCS-9.1: Meet state and federal clean air standards by minimizing particulate matter emissions from construction activities.	<b>Consistent.</b> As discussed in Section 5.3, Air Quality, the Project would not result in a significant impact related to construction activity air quality emissions.
Policy OCS-9.2: Buffer sensitive land uses, such as residences, schools, care facilities, and recreation areas from major air pollutant emission sources, including freeways, manufacturing, hazardous materials storage, wastewater treatment, and similar uses.	<b>Consistent.</b> As discussed in Section 3.0, Project Description, the Project site is surrounded by vacant land and commercial uses. The proposed warehouses would include a landscaped buffer along Barnett Road as well as including landscaping around the perimeter of the site so as to screen warehouse activities from adjacent uses.
Policy OCS-9.3: Comply with regional, state, and federal standards and programs for control of all airborne pollutants and noxious odors, regardless of source.	<b>Consistent.</b> As discussed in Section 5.3, Air Quality, the Project would comply with regional, state, and federal air quality standards.



Policy OCS-9.5: Comply with the mandatory requirements of Title 24 Part 1one of the California Building Standards Code (CALGreen) and Title 24 Part 6 Building and Energy Efficiency Standards.	<b>Consistent.</b> Operation of the proposed buildings would comply with all the energy efficiency requirements under Title 24 (as provided in Chapter 150.0018.06 of the City's Municipal Code and included as PPP ENG-1) and all applicable City business and energy codes ordinances.
Goal OSC-10: An environmentally aware community that is responsive to changing climate conditions and actively seeks to reduce local greenhouse gas emissions	<b>Consistent.</b> As discussed in Section 5.8, Greenhouse Gas Emissions, the proposed Project would result in a less than significant impact related to GHGs.
Policy OCS-10.4: Consider impacts to climate change as a factor in evaluation of policies, strategies, and projects.	<b>Consistent.</b> As discussed in Section 5.8, Greenhouse Gas Emissions, the proposed Project would result in a less than significant impact related to GHGs, the increase of which is a primary driver of climate change.
Goal CD-5: Economic Development Corridors that are visually distinctive and vibrant and combine commercial, industrial, residential, civic, cultural, and recreational uses.	<b>Consistent.</b> The Project would comply with design guidelines under the Economic Development Corridor – Northern Gateway (EDC-NG) zoning designation (see Table AES-1). The Project site would be complimentary to the surrounding land uses and visually appealing, with buffered landscaping, articulated building design, and cohesive color palette.
Policy CD-5.2: Include open space and/or recreational amenities in EDC areas to provide visual relief from development, form linkages to adjacent uses and other portions of the economic development corridor, and serve as buffers between uses, where necessary.	<b>Consistent.</b> The Project would comply with design guidelines under the Economic Development Corridor – Northern Gateway (EDC-NG) zoning designation (see Table AES-1). The Project site would include frontage setbacks and a landscaped buffer around the site consistent with the City's requirements for development proposed within EDC-NG.
Policy CD-5.6: Orient building entrance toward the street and provide parking in the rear, when possible.	<b>Consistent.</b> As shown in Figure 3-1, Site Plan, the proposed buildings are oriented towards Barnett Road and include parking in the rear.
Policy CD-5.8: Encourage adjacent commercial and industrial buildings to share open, landscaped, and/or hardscaped areas for visual relief, access, and outdoor employee gathering places.	<b>Consistent.</b> The Project would comply with design guidelines under the Economic Development Corridor – Northern Gateway (EDC-NG) zoning designation (see Table AES-1). The Project site would include frontage setbacks and a landscaped buffer around the site consistent with the City's requirements for development proposed within EDC-NG.
Goal CD-6: Attractive landscaping, lighting, and signage that conveys a positive image of the community.	<b>Consistent.</b> As shown in Figure 3-3, Landscape Plan, the proposed Project includes landscaping around the perimeter of the site as well as throughout the parking areas and along the Projects Barnett Road frontage.
Policy CD-6.3: Require property owners to maintain the existing landscape on developed nonresidential sites and replace unhealthy or dead landscaping.	<b>Consistent.</b> The Project Applicant/Developer would be required to maintain landscaping on the Project site.
Policy CD-6.4: Require that lighting and fixtures be integrated with the design and layout of a project and that they provide a desirable level of security and illumination.	<b>Consistent.</b> The Project would include the provision of nighttime lighting for security purposes around the buildings and in the parking areas. As discussed in Section 5.1, Aesthetics, all outdoor lighting would be hooded or appropriately angled away from adjacent land uses and would comply with the City's Municipal Code Chapters 9.205 (Lighting Standards) and 6.01 (Dark Sky; Light Pollution) (included as PPP AES-1) which provides for directing lighting away from adjacent uses and intensity of security lighting.
Goal ED-1: A diverse and robust local economy capable of providing employment for all residents desiring to work in the city.	<b>Consistent.</b> The proposed Project includes construction and operation of two warehouse facilities which will increase employment opportunities within Menifee.



ED-1.2: Diversify the local economy and create a balance of employment opportunities across skill and education levels, wages and salaries, and industries and occupations.	<b>Consistent.</b> The proposed Project includes construction and operation of two warehouse facilities which will increase employment opportunities within Menifee.
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### **Existing Plans, Programs, or Policies**

There are no impact reducing Plans, Programs, or Policies related to land use and planning that are applicable to the Project.

### **Mitigation Measures**

No mitigation measures related to land use and planning are required.

### **Sources**

City of Menifee. Development Code Chapter 9.140, Economic Development Corridor Zones.  
Available at: <https://online.encodeplus.com/regs/menifee-ca/ereader/index.html>

City of Menifee. General Plan, Land Use Element. Available at:  
[https://www.cityofmenifee.us/DocumentCenter/View/14701/FINAL\\_Land-Use-Element\\_11322](https://www.cityofmenifee.us/DocumentCenter/View/14701/FINAL_Land-Use-Element_11322)



	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b><u>12. MINERAL RESOURCES.</u></b> Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?**

**No Impact.** According to the Menifee General Plan Open Space and Conservation Element Exhibit OSC-3, Mineral Resource Zones, the Project site is identified as an Urban Area and is not identified as within a mineral resource zone. Therefore, development of the site would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. No impact would occur.

**b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on the general plan, specific plan or other land use plan?**

**No Impact.** As described above, the Project site is not located within a region of known mineral significance. The site has a General Plan designation of Economic Development Corridor (EDC) and is zoned Economic Development Corridor – Northern Gateway (EDC-NG). Therefore, implementation of the Project would not result in the loss of locally important mineral resources, and impacts would not occur.

**Existing Plans, Programs, or Policies**

There are no impact reducing Plans, Programs, or Policies related to mineral resources that are applicable to the Project.

**Mitigation Measures**

No mitigation measures related to mineral resources are required.

**Sources**

City of Menifee. General Plan 2030. Available at: <https://www.cityofmenifee.us/221/General-Plan>



	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>13. NOISE.</b> Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

#### **Less Than Significant Impact.**

#### **City of Menifee Noise Thresholds**

##### City of Menifee General Plan

The has adopted a Noise Element of the General Plan to control and abate environmental noise, and to protect the citizens of City of Menifee from excessive exposure to noise. The Noise Element specifies the maximum allowable unmitigated exterior noise levels for new developments impacted by transportation noise sources such as arterial roads, freeways, airports and railroads. In addition, the Noise Element identifies several polices to minimize the impacts of excessive noise levels throughout the community and establishes noise level requirements for all land uses. To protect residents from excessive noise, the Noise Element contains the following goal related to the Project:

N-1 Noise-sensitive land uses are protected from excessive noise and vibration exposure.

The noise policies specified in the Noise Element provide the guidelines necessary to satisfy this goal. Policy N-1.2 states that new developments are required to comply with the noise standards of local, regional, and state building code regulations, including but not limited to the City's Municipal Code, Title 24 of the California Code of Regulations, the California Green Building Code, and subdivision and development codes. In addition, the Noise Element provides Policy N-1.11 to discourage the siting of noise-sensitive uses in areas in excess of 65 dBA CNEL without appropriate mitigation.



City of Menifee Development Code

The municipal code includes the following regulations related to noise.

Construction

Section 9.215.060(C) of the City's Development Code indicates that private construction projects, located within one-quarter of a mile from an occupied residence, are considered exempt from the Development Code noise standards if they occur within the permitted hours of 6:30 a.m. and 7:00 p.m., with no activity allowed on Sundays and nationally recognized holidays.

However, neither the General Plan Noise Element or Development Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers, which would allow for a quantified determination of what CEQA constitutes a *substantial temporary or permanent increase in ambient noise levels*. Therefore, a numerical construction threshold based on Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* is used for analysis of daytime construction impacts. Due to the lack of standardized construction noise thresholds, the FTA provides guidelines that can be considered reasonable criteria for construction noise assessment. The FTA considers a daytime exterior construction noise level of 80 dBA  $L_{eq}$  as a reasonable threshold for noise sensitive residential land use.

Operation

To analyze noise impacts originating from a designated fixed location or private property such as the proposed Project, stationary-source (operational) noise such as the expected are typically evaluated against standards established under a jurisdiction's Development Code or General Plan. The City of Menifee Development Code, Chapter 9.215 Noise Control Regulations, Section 9.215.060 Table 9.215.060-1 establishes the permissible noise level that may intrude into a neighbor's property. The Development Code establishes the exterior noise level criteria for noise-sensitive residential properties affected by stationary noise sources. For residential properties, the exterior noise level shall not exceed 65 dBA  $L_{eq}$  during daytime hours (7:00 a.m. to 10:00 p.m.) and shall not exceed 45 dBA  $L_{eq}$  during the nighttime hours (10:00 p.m. to 7:00 a.m.). Since existing uses in the Project study area include non-residential, medical/hospital, and school uses, and the City of Menifee does not identify exterior noise level standards specific to these uses, the residential exterior noise level limits are applied to all noise-sensitive receiver locations in the Project study area.

**Table N-1: Operational Noise Standards**

City	Land Use	Exterior Noise Level Standards (dBA $L_{eq}$ ) <sup>2</sup>	
		Daytime	Nighttime
Menifee <sup>1</sup>	Residential	65	45

<sup>1</sup> City of Menifee Development Code, Section 9.215.060.

<sup>2</sup>  $L_{eq}$  represents a steady state sound level containing the same total energy as a time varying signal over a given period.  
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

**Existing Noise Levels**

To identify the existing ambient noise level environment, long term (24 hours) noise level measurements were taken at five locations in the Project area. The Project site is surrounded by mostly undeveloped land, with several rural residences further away from the site. The background ambient noise levels in the Project area are dominated by transportation related noise. Nearest



sensitive receptors to the Project site are identified as noise measurement locations in Figure 5-1 and include the following:

- R1: Location R1 represents the existing noise sensitive residence at 26038 Hull Street, approximately 1,816 feet west of the Project site. Receiver R1 is placed in the private outdoor living areas (backyards) facing the Project site.
- R2: Location R2 represents the existing noise sensitive residence at 26515 Alta Avenue, approximately 2,435 feet southeast of the Project site. Receiver R2 is placed in the private outdoor living areas (backyards) facing the Project site.
- R3: Location R3 represents the existing noise sensitive residence at 26635 Summer Sunshine Drive, approximately 1,710 feet southeast of the Project site. Receiver R3 is placed in the private outdoor living areas (backyards) facing the Project site.
- R4: Location R4 represents the nearest noise sensitive receiver location within the planned DR Horton residential project located approximately 1,092 feet south of the Project site. Receiver R4 is placed in the private outdoor living areas (backyards) facing the Project site. A 24-hour noise measurement was taken near this location, L3, to describe the existing ambient noise environment.
- R5: Location R5 represents the existing noise sensitive residence at 26458 Starr Drive, approximately 1,535 feet southwest of the Project site. Receiver R5 is placed in the private outdoor living areas (backyards) facing the Project site.
- R6: Location R6 represents the existing noise sensitive residence at 26340 Corsica Lane, approximately 1,445 feet west of the Project site. Receiver R6 is placed in the private outdoor living areas (backyards) facing the Project site.

The existing noise levels are provided in Table N-2.

**Table N-2: Long Term Noise Measurement Summary**

Location <sup>1</sup>	Description	Energy Average Noise Level (dBA L <sub>eq</sub> ) <sup>2</sup>	
		Daytime	Nighttime
L1	Located west of the Project site near single-family residence at 26038 Hull Street.	48.1	49.8
L2	Located southeast of the Project site near single-family residence at 26515 Alta Avenue.	61.7	59.9
L3	Located southeast of the Project site near single-family residence at 26635 Summer Sunshine Drive.	47.8	47.2
L4	Located southwest of the Project site near single-family residence at 26350 Starr Drive.	53.6	54.2
L5	Located west of the Project site near single-family residence at 26340 Corsica Lane.	51.6	53.8

<sup>1</sup> See Exhibit 5-1 for the noise level measurement locations.

<sup>2</sup> Energy (logarithmic) average levels. The long-term 24-hour measurement worksheets are included in Appendix 5.2.

"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

Source: Appendix M



**Figure 5-1: Noise Measurement Locations**



**Construction**

As described above, Municipal Code Section 8.54.070 exempts construction noise from the Development Code noise standards if it occurs within the permitted hours of 6:30 a.m. and 7:00 p.m., with no activity allowed on Sundays and nationally recognized holidays. The Project would comply with the City's construction hours regulations. Short term noise impacts could occur during construction of the Project in two forms: noise from construction crew commutes and noise generated during construction activities. Construction is expected to occur in the following stages: excavation and grading, building construction, architectural coating, and paving.

Table N-3 below lists typical construction equipment noise levels based on a distance of 50 feet between with equipment and a noise receptor. Noise levels were combined to provide a composite score in the case all phase equipment was operating concurrently. As shown, noise levels generated by heavy construction equipment can range from approximately 77 dBA to 83 dBA when measured at 50 feet.

**Table N-3: Typical Construction Equipment Noise Levels**

Construction Stage	Reference Construction Activity	Reference Noise Level @ 50 Feet (dBA Leq) <sup>1</sup>	Combined Noise Level (dBA Leq) <sup>2</sup>	Combined Sound Power Level (PWL) <sup>3</sup>
Site Preparation	Crawler Tractors	78	80	112
	Hauling Trucks	72		
	Rubber Tired Dozers	75		
Grading	Graders	81	83	115
	Excavators	77		
	Compactors	76		
Building Construction	Cranes	73	81	113
	Tractors	80		
	Welders	70		
Paving	Pavers	74	83	115
	Paving Equipment	82		
	Rollers	73		
Architectural Coating	Cranes	73	77	109
	Air Compressors	74		
	Generator Sets	70		

<sup>1</sup> FHWA Roadway Construction Noise Model (RCNM).

<sup>2</sup> Represents the combined noise level for all equipment assuming they operate at the same time consistent with FTA Transit Noise and Vibration Impact Assessment guidance.

<sup>3</sup> Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings. Sound power levels calibrated using the CadnaA noise model at the reference distance to the noise source.

Source: Appendix M

To evaluate whether the Project will generate potentially significant short-term noise levels at nearest receiver locations, a construction-related daytime noise level threshold of 80 dBA Leq (as recommended by FTA) is used as a reasonable threshold to assess the daytime construction noise level impacts. Table N-4 shows that the nearest receiver locations will satisfy the reasonable daytime 80 dBA Leq significance threshold during Project construction activities. Therefore, the Project would result in less than significant noise impacts during Project construction.



**Table N-4: Potential Construction Noise Impacts at Nearest Receptor**

Receiver Location <sup>1</sup>	Construction Noise Levels (dBA L <sub>eq</sub> )		
	Highest Construction Noise Levels	Threshold	Threshold Exceeded?
R1	51.1	80	No
R2	48.0	80	No
R3	50.0	80	No
R4	52.9	80	No
R5	51.2	80	No
R6	52.7	80	No

<sup>1</sup> Noise receiver locations are shown on Figure 5-1.

Source: Appendix M

As shown in Table N-4, it is expected that composite noise levels during construction would reach 52.7 dBA L<sub>eq</sub> at the nearest sensitive residential receptor to the southwest of the site. The construction noise levels predicted in Table N-4 would only occur when all construction equipment is operating simultaneously, which is a conservative assumption, and unlikely to occur. Additionally, noise generated from construction activities is temporary in nature and would cease upon completion of construction. Furthermore, construction-related noise impacts would remain below the 80 dBA L<sub>eq</sub> construction noise level criteria for daytime construction noise level criteria as established by the FTA for residential and industrial land uses, respectively, and therefore Project construction noise would be less than significant.

### Operation

**Onsite Operational Noise.** The City of Menifee Development Code establishes that for residential properties, the exterior noise level shall not exceed 65 dBA L<sub>eq</sub> during daytime hours (7:00 a.m. to 10:00 p.m.) and shall not exceed 45 dBA L<sub>eq</sub> during the nighttime hours (10:00 p.m. to 7:00 a.m.). Long term off-site stationary noise impacts from the Project could include loading dock activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements.

Tables N-5 and N-6 show that the combined hourly noise levels generated by HVAC equipment, trash enclosure activities, and truck delivery activities at the closest off-site land uses would range from 38.4 dBA Leq to 44.7 dBA Leq at the sensitive receptors. These levels are well below the City of Menifee's exterior noise standard of 65 dBA Leq. Nighttime hourly noise levels at the off-site receiver locations are expected to range from 38.3 to 44.7 dBA L<sub>eq</sub>. Because Project noise levels would not exceed the City's thresholds, Project operation would result in a less than significant noise impact.

**Table N-5: Daytime Exterior Noise Level Impacts**

Noise Source <sup>1</sup>	Operational Noise Levels by Receiver Location (dBA Leq)					
	R1	R2	R3	R4	R5	R6
Loading Dock Activity	37.9	38.1	39.3	42.3	40.6	44.3
Roof-Top Air Conditioning Units	23.2	21.8	23.3	25.6	24.5	25.2
Trash Enclosure Activity	19.6	0.3	14.6	21.9	20.6	23.9
Parking Lot Vehicle Movements	29.7	23.2	27.0	31.3	30.1	31.4



Truck Movements	25.8	18.3	20.2	24.6	24.0	26.6
<b>Total (All Noise Sources)</b>	<b>38.9</b>	<b>38.4</b>	<b>39.7</b>	<b>42.8</b>	<b>41.2</b>	<b>44.7</b>

Source: Appendix M

**Table N-6: Nighttime Exterior Noise Level Impacts**

Noise Source	Operational Noise Levels by Receiver Location (dBA Leq)					
	R1	R2	R3	R4	R5	R6
Loading Dock Activity	37.9	38.1	39.3	42.3	40.6	44.3
Roof-Top Air Conditioning Units	20.8	19.4	20.9	23.2	22.1	22.8
Trash Enclosure Activity	19.6	0.3	14.6	21.9	20.6	23.9
Parking Lot Vehicle Movements	29.7	23.2	27.0	31.3	30.1	31.4
Truck Movements	25.8	18.3	20.2	24.6	24.0	26.6
<b>Total (All Noise Sources)</b>	<b>38.9</b>	<b>38.3</b>	<b>39.7</b>	<b>42.8</b>	<b>41.2</b>	<b>44.7</b>

Source: Appendix M

**b) Generation of excessive groundborne vibration or groundborne noise levels?****Less Than Significant Impact.****Construction**

Construction activity can cause varying degrees of ground vibration, depending on the equipment and methods used, the distance to receptors, and soil type. Construction vibrations are intermittent, localized intrusions. The use of heavy construction equipment, particularly large bulldozers, and large loaded trucks hauling materials to or from the site generate construction-period vibration impacts.

The Noise Study uses vibration standards in the FTA Manual to analyze ground-borne vibration impacts on human annoyance. The Noise Study discusses the level of human annoyance using vibration levels in VdB and assesses the potential for building damages using vibration levels in PPV (in/sec). Vibration levels calculated in VdB are best for characterizing human response to building vibration, while vibration level in PPV is best for characterizing potential for damage. The threshold at which vibration levels would result in annoyance is 78 VdB for daytime residential uses. The FTA guidelines indicated that for a non-engineered timber and masonry building, the construction vibration damage criterion is 0.2 in/sec in PPV. Table N-7 below shows the PPV and VdB values at 25 feet from the construction vibration sources.

**Table N-7: Construction Equipment Vibration Levels**

Equipment	PPV (in/sec) at 25 feet
Small bulldozer	0.003
Jackhammer	0.035
Loaded Trucks	0.076
Large bulldozer	0.089
Vibratory Roller	0.210

Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual



The nearest noise sensitive buildings adjacent to the Project site can best be described as “older residential structures” with a maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec). As shown in Table N-7, at approximately 25 feet, a large bulldozer would create a vibration level of 0.089 inch per second peak particle velocity (PPV). Table N-8 presents the expected Project related vibration levels at the nearby receiver locations. At distances ranging from 1,092 to 2,435 feet from Project construction activities, construction vibration velocity levels are estimated at 0.000 to 0.001 PPV in/sec. Based on maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec), the typical Project construction vibration levels will fall below the building damage thresholds at all the noise sensitive receiver locations. As such, construction vibration impacts would be less than significant.

**Table N-8: Potential Construction Vibration Annoyance Impacts to Nearest Receptors**

Location	Distance to Const. Activity (Feet)	Typical Construction Vibration Levels PPV (in/sec)						Thresholds PPV (in/sec)	Thresholds Exceeded?
		Small bulldozer	Jack- hammer	Loaded Trucks	Large bulldozer	Vibratory Roller	Highest Vibration Level		
R1	1,816'	0.000	0.000	0.000	0.000	0.000	0.000	0.3	No
R2	2,435'	0.000	0.000	0.000	0.000	0.000	0.000	0.3	No
R3	1,710'	0.000	0.000	0.000	0.000	0.000	0.000	0.3	No
R4	1,092'	0.000	0.000	0.000	0.000	0.001	0.001	0.3	No
R5	1,535'	0.000	0.000	0.000	0.000	0.000	0.000	0.3	No
R6	1,445'	0.000	0.000	0.000	0.000	0.000	0.000	0.3	No

"PPV" = Peak Particle Velocity  
Source: Appendix M

### Operation

Truck vibration levels are dependent on vehicle characteristics, load, speed, and pavement conditions. According to the FTA Transit Noise Impact and Vibration Assessment, trucks rarely create vibration that exceeds 70 VdB or 0.003 in/sec RMS (unless there are frequent potholes in the road). Trucks transiting to the site and onsite would be travelling at very low speeds so it is expected that truck vibration impacts at nearby sensitive uses would not exceed the FTA guidelines detailed previously. Therefore, operational vibration impacts would be less than significant.

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

**Less Than Significant Impact.** The Perris Valley Airport is located approximately 1.6 miles northeast of the Project Site. The Project site is just outside the Perris Valley Airport Influence Area and is not subject to the Riverside County Airport Land Use Compatibility Plan Policy Document (RC ALUCP). The Project site is located outside of the 55 dBA CNEL noise level contour of Perris Valley Airport and is considered an acceptable use. Therefore, the proposed Project would not expose people working in the Project area to excessive noise levels from airports. Impacts would be less than significant.



**Plans, Programs, or Policies (PPPs)**

None.

**Mitigation Measures**

None.



	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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**14. POPULATION AND HOUSING.**

Would the project:

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**a) Induce substantial unplanned population growth in an area, either directly or indirectly?**

**No Impact.** The proposed Project would redevelop the 13.89-acre Project site with 251,133 SF of warehouse and manufacturing uses. According to SCAG, the generation rate for employees required for operation of an industrial project is 1 employee for every 1,195 SF of industrial space. Based on the SCAG employment generation rates, the Project is estimated to generate the need for approximately 210 employees. The employees that would fill these roles are anticipated to come from the region, as the unemployment rate of the City of Menifee in July 2022 was 3.9 percent, the City of Perris was 4.8 percent, and the City of Murrieta was at 2.8 percent (State Employment Development Department 2022). Due to these levels of unemployment, it is anticipated that new employees at the Project site would already reside within commuting distance and would not generate needs for any housing.

In addition, should the Project require employees to relocate to the area for work, there is sufficient vacant housing available within the region. The City of Menifee has a vacancy rate of 6.3 percent. The City of Menifee has a total of 38,734 housing units; 36,308 of which are occupied (State Department of Finance 2022). Therefore, impacts related to unplanned population growth from the Project would be less than significant.

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

**No Impact.** The Project site is currently vacant and undeveloped and does not contain any housing. The Project would develop the site to construct two new industrial warehouses. No housing would be displaced by implementation of the proposed Project, and no impact would occur.

**Existing Plans, Programs, or Policies**

There are no impact reducing Plans, Programs, or Policies related to population and housing are applicable to the Project.



**Mitigation Measures**

No mitigation measures related to population and housing are required.

**Sources**

None.



Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

## 15. PUBLIC SERVICES.

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

Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) **Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for:**

**Fire protection?**

**Police protection?**

**Schools?**

**Parks?**

**Other public facilities?**

**Fire Protection – Less than Significant Impact.** The City of Menifee contracts with Cal Fire and Riverside County Fire for fire services. The Fire Department responds to fire prevention and suppression, rescues, traffic accidents, medical emergencies, and requests for general public assistance. The closest fire station to the Project is Riverside County City of Menifee Fire Station 7, located at 28349 Bradley Road, which is located 2.10 miles southeast of the Project site. Redevelopment of the Project site would likely result in an increased number of employees onsite as the site would go from undeveloped to containing two new warehousing totaling 251,133 square feet. However, the Project would include new fire prevention infrastructure pursuant to current code requirements. The City has adopted the California Fire Code (Title 24, Part 9 of the California Code of Regulations) in Chapter 8.20 of the City's Municipal Code, which regulates new structures related to safety provisions, emergency planning, fire-resistant construction, fire protection system, and appropriate emergency access throughout the site.



Since the site is already served by the existing fire station, and the Project would be constructed pursuant to existing California Fire Code regulations, the Project would not result in the need for new or physically altered fire department facilities that could cause significant environmental impacts. Additionally, the Project would pay any required development impact fees and have plans approved by the Fire Department. Therefore, the Project would result in less than significant impacts related to fire protection services.

**Police Protection - Less than Significant Impact.** The Menifee Police Department provides policing services for the City. The Menifee Police Department is located at 29714 Haun Road, approximately 3.5 miles southeast of the Project site. As described in the previous response, the Project would result in an increased number of employees onsite. Crime and safety issues during Project construction may include: theft of building materials and construction equipment, malicious mischief, graffiti, and vandalism.

During operation, the Project is anticipated to generate a typical range of police service calls, such as vehicle break-ins, residential thefts and disturbances, and vandalism. Security concerns would be addressed by providing low-intensity security lighting. Because the Project would generate an increase in employees on the Project site, it may result in an incremental increase in demands on law enforcement services. However, because the Project site is within an area that is already served, the increase would not be significant when compared to the current demand levels. In addition, the response to calls for law enforcement services from the Project site would not require construction or expansion of the Police Department headquarters facilities. Therefore, the Project would not result in the need for new or physically altered police protection facilities, and impacts related to police protection services would be less than significant.

**Schools – Less than Significant Impact.** The Proposed Project is located within the Romoland School District and Perris Union High School District. The nature of the Proposed Project would not generate additional demand on school facilities. The Project is an industrial use that would not directly generate students. As described previously, the proposed Project is not anticipated to generate a new population as employees are expected to live within the region. During construction of the Project, workers are anticipated to come from the local region and travel from job site to job site. Construction of the Project is anticipated to occur over 11 months. Thus, construction workers and their student aged children are not anticipated to move to the Project area in response to the Project. Therefore, the number of students from construction of the Project is not anticipated to increase. Thus, substantial in-migration of employees that could generate new students is not anticipated to occur. As required by all Projects within the City, the proposed Project is required to pay School Mitigation Impact fees, as included by PPP PS-1. Overall, impacts related to schools would be less than significant.

**Parks – Less than Significant Impact.** The proposed Project would develop a new industrial warehouse and does not include development of park facilities. In addition, as described previously, the proposed Project is not anticipated to result in an influx of new residents, as the employees needed to operate the proposed buildings are primarily anticipated to come from the unemployed labor force in the region. Thus, the proposed Project would not generate a substantial population that would require construction or expansion of park facilities, and impacts would be less than significant.

**Other Public Facilities – Less than Significant Impact.** Refer to the previous responses. The proposed Project would not result in an increased resident population or a significant increase in the local



workforce. Based on these factors, the proposed Project would not result in any long-term impacts to other public facilities.

### **Existing Plans, Programs, or Policies**

**PPP PS-1: School Fees:** Prior to the issuance of a building permit, the applicant shall provide payment of the appropriate fees set forth by the applicable school districts related to the funding of school facilities pursuant to Government Code Section 65995 et seq.

### **Mitigation Measures**

No mitigation measures related to public services are required.

### **Sources**

City of Menifee. Fire Department. Accessed: <https://www.cityofmenifee.us/103/Fire-Department>

Menifee Police Department. Accessed: <https://menifeepolice.org/>

City of Menifee Municipal Code. Accessed at:  
<https://codelibrary.amlegal.com/codes/menifee/latest/overview>



	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>16. RECREATION.</b>				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of the facility would be accelerated?**

**Less than Significant Impact.** As described previously, the proposed Project would develop the site with two new warehouse buildings, which would not result in an influx of new residents, as the employees needed to operate the Project are primarily anticipated to come from the unemployed labor force in the region. Thus, the proposed Project would not generate a substantial population that would generate significant use of existing neighborhood or regional parks and recreation facilities, such that substantial physical deterioration would occur or be accelerated, and impacts would be less than significant.

**b) Include or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?**

**Less than Significant Impact.** As discussed above, the proposed Project would not result in an influx of new residents. Thus, the proposed Project would not generate a substantial population that would generate significant use of existing recreational facilities, and construction of new or expansion of existing recreational facilities is not anticipated to be required. Thus, impacts related to recreation would be less than significant.

**Existing Plans, Programs, or Policies**

There are no impact reducing Plans, Programs, or Policies related to recreation are applicable to the Project.

**Mitigation Measures**

No mitigation measures related to recreation are required.

**Sources**

None.



	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>17. TRANSPORTATION.</b> Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The discussion below is based on the Trip Generation and VMT Screening Analysis and Traffic Impact Analysis, prepared by EPD Solutions, Inc. (EPD 2022) (Appendices M and N).

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

**Less than Significant Impact.**

**Construction**

Construction activities associated with the Project would generate vehicular trips from construction workers traveling to and from the Project site, delivery of construction supplies and import materials to, and export of debris from, the Project site. However, these activities would only occur for an estimated time period of 11 months. The increase of trips during construction activities would be limited and are not anticipated to exceed the number of operational trips described below. The short-term vehicle trips from construction of the Project would generate less than significant traffic related impacts.

**Operation**

As detailed in the Project description, the Project site would include development of the undeveloped project site with two industrial buildings, totaling approximately 251,133 SF, associated parking, landscaping, and utility improvements to serve the site. The Project would introduce new vehicular and truck traffic from workers and proposed industrial operations.

Table T-1 shows that during operation the proposed Project would generate a total of 506 daily trips, 56 AM peak hour trips and 59 PM peak hour trips. The trip generation analysis for the Project was prepared using trip rates from the Institute of Transportation Engineers (ITE) Trip Generation, 11th Edition (2021) based on the "Warehouse" and "Manufacturing" land uses.



**Table T- 1: Project Trip Generation**

			AM Peak Hour			PM Peak Hour			
Land Use		Units	Daily	In	Out	Total	In	Out	Total
<u>Trip Rates</u>									
Manufacturing <sup>1</sup>		TSF	4.75	0.52	0.16	0.68	0.23	0.51	0.74
Warehouse <sup>2</sup>		TSF	1.71	0.13	0.04	0.17	0.05	0.13	0.18
<b><u>Total Vehicle Trip Generation</u></b>									
Proposed Manufacturing	25.113	TSF	119	13	4	17	6	13	19
Proposed Warehouse	226.020	TSF	386	30	9	38	11	29	41
Total Trip Generation			506	43	13	56	17	42	59
<b><u>Vehicle Mix<sup>3</sup></u></b>									
		<b><u>Percent</u></b>							
Passenger Vehicles		72.50%	367	31	9	40	12	31	43
2-Axle Trucks		4.60%	23	2	1	3	1	2	3
3-Axle Trucks		5.70%	29	2	1	3	1	2	3
4+-Axle Trucks		17.20%	87	7	2	10	3	7	10
		100%	506	43	13	56	17	42	59

TSF = Thousand Square Feet

PCE = Passenger Car Equivalent

<sup>1</sup> Trip rates from the Institute of Transportation Engineers, *Trip Generation, 11th Edition, 2021*. Land Use Code 140 - Manufacturing.<sup>2</sup> Trip rates from the Institute of Transportation Engineers, *Trip Generation, 11th Edition, 2021*. Land Use Code 150 - Warehousing.<sup>3</sup> Vehicle Mix from the SCAQMD Warehouse Truck Trip Study Data Results and Usage, July 2014. Classification: Without Cold Storage<sup>4</sup> Passenger Car Equivalent (PCE) factors from San Bernardino County CMP, Appendix B - Guidelines for CMP Traffic Impact Analysis Reports in San Bernardino County, 2016

As described under Table LU-1, Land Use Consistency, the Project would be consistent with applicable goals and policies from the City's General Plan Circulation Element. Additionally, a Traffic Impact Analysis (TIA) was conducted for the Project to determine the Project's influence on level of service (LOS) in relation to the City of Menifee LOS Traffic Study Guidelines. Opening Year for the Project is 2024. Table T-2 includes the anticipated LOS for intersections that would be potentially affected by the Project. Several intersections are under the jurisdiction of a combination of the City of Menifee, the City of Perris, and Caltrans.

**Table T- 2: Opening Year Plus Project AM and PM Peak Hour Level of Service**

Intersection	Jurisdiction	Traffic Control	Opening Year				Opening Year Plus Project				Difference		Threshold of Significance	Significant?
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak	PM Peak		
			Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>				
1. Murrieta Rd/Ethanac Rd	City of Menifee/Perris	Signal	101.2	F	112.5	F	102.1	F	113.4	F	0.9	0.9	D	Yes
2. Ethanac Rd/Project Dwy 1	City of Menifee/Perris	TWSC	-	-	-	-	18.9	C	17.5	C	-	-	D	No
3. Barnett Rd-Case Rd/Ethanac Rd	City of Menifee/Perris	Signal	82.3	F	60.4	E	97.9	F	70.1	E	15.6	9.7	D	Yes
4. Barnett Rd/Project Dwy 2	City of Menifee/Perris	TWSC	-	-	-	-	0.0	A	0.0	A	-	-	D	No
5. Barnett Rd/Project Dwy 3	City of Menifee/Perris	TWSC	-	-	-	-	10.9	B	10.2	B	-	-	D	No
6. Barnett Rd/Project Dwy 4	City of Menifee/Perris	TWSC	-	-	-	-	10.7	B	10.0	B	-	-	D	No
7. I-215 SB Ramps/Ethanac Rd	Caltrans/City of Perris	Signal	339.4	F	390.4	F	341.8	F	405.4	F	2.4	15.0	E	Yes
8. I-215 NB Ramps/Ethanac Rd	Caltrans/City of Perris	Signal	282.7	F	422.9	F	288.0	F	429.8	F	5.3	6.9	E	Yes

F=Unsatisfactory Level of Service

TWSC = Two-Way Stop Control

<sup>1</sup>Delay in Seconds<sup>2</sup>Level of Service



As stated in the City of Menefee LOS TS Guidelines, a project that adds 50 trips to an intersection that operates at an LOS F in the base line scenario would result in a cumulative deficiency. As shown in Table T-2, the following intersections would operate at an unsatisfactory LOS:

1. Murrieta Road/Ethanac Road (LOS F at AM/PM peak hour)
3. Barnett Road-Case Road/Ethanac Road (LOS F at AM peak hour and LOS E at PM peak hour)
7. I-215 SB Ramps/Ethanac Road (LOS F at AM/PM peak hour)
8. I-215 NB Ramps/Ethanac Road (LOS F at AM/PM peak hour)

For Intersection 1: Murrieta Road/Ethanac Road, the project adds 10 AM and 10 PM peak hour trips to the intersection; therefore, the Project would not result in a significant deficiency. Intersection 3: Barnett Road-Case Road/Ethanac Road would operate at LOS F during AM peak hour and LOS E during PM peak hour and would result in an increase of delay more than 2 seconds after the proposed project is constructed. Therefore, the Project would have a significant deficiency at Intersection 3: Barnett Road-Case Road/Ethanac Road. Intersections 7 and 8: I-215 SB Ramps/NB Ramps and Ethanac Road would operate at LOS F during AM and PM peak hour and would result in an increase of delay more than 2 seconds after the proposed Project is constructed. Therefore, the Project would have a significant deficiency at Intersections 7 and 8: I-215 SB Ramps/NB Ramps and Ethanac Road.

The following improvements would be implemented to improve the LOS to satisfactory or better:

3. Barnett Road-Case Road/Ethanac Road (AM and PM peak hours): Widen and restripe the northbound shared left-thru-right lane to provide an exclusive right-turn lane and a shared thru-left turn lane. To increase intersection safety, it is recommended that cat tracks pavement markers be installed for all the edges of the dual southbound lane instead of the single cat track currently installed in the middle of the southbound lane turns. It is also recommended that a "Keep Clear" pavement marking be installed approximately 85 feet beyond the stop line of the 50 feet left turn pocket at Barnett Road/Ethanac Road. This will ensure that the westbound lane traffic does not block traffic waiting to make a SBL given the staggered nature of this intersection.
7. I-215 SB Ramps/Ethanac Road (AM and PM peak hours): Widen and restripe the southbound shared thru-left turn lane to provide an exclusive left-turn lane and a shared thru-right turn lane. Widen and restripe the eastbound approach to add two thru-lanes. Widen and restripe the westbound approach to add a second left-turn lane. In addition, add overlap right-turn phasing during the southbound phase.
8. 215 NB Ramps/Ethanac Road (AM and PM peak hours): Widen and restripe the northbound shared thru-left turn lane to provide an exclusive left-turn lane and a shared thru-left turn lane. Widen and restripe the eastbound approach to add an exclusive left-turn lane and a thru-lane. Widen and restripe the westbound approach to add three thru-lanes and an exclusive right-turn lane. In addition, add overlap right-turn phasing during the northbound phase.

As seen in Table T-3, all intersections anticipated to experience unsatisfactory LOS would improve to a satisfactory LOS with implementation of the proposed improvements. It should be noted that the ultimate planned configuration of Ethanac Road is that of a six-lane roadway. The roadway expansion would help reduce the delay experienced at the intersections of I-215 SB Ramps/NB Ramps and Ethanac Road.



Table T- 3: Opening Year Plus Project Improvement AM and PM Peak Hour Level of Service

Intersection	Opening Year				Opening Year Plus Project IMP				Recommended Improvements	Opening Year Plus Project IMP				Threshold of Significance	Significant?			
	AM Peak		PM Peak		AM Peak		PM Peak			AM Peak		PM Peak						
	Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>		Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>					
	Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>		Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>					
3. Barnett Rd-Case Rd/Ethanac Rd Jurisdiction: City of Menifee/City of Perris Traffic Control: Signal																		
	82.3	F	60.4	E	97.9	F	70.1	E					51.5	D	51.2	D	D	No
7. I-215 SB Ramps/Ethanac Rd Jurisdiction: Caltrans/City of Perris Traffic Control: Signal																		
	339.4	F	390.4	F	341.8	F	405.4	F					29.3	C	47.0	D	E	No
8. I-215 NB Ramps/Ethanac Rd Jurisdiction: Caltrans/City of Perris Traffic Control: Signal																		
	282.7	F	422.9	F	288.0	F	429.8	F					33.8	C	48.1	D	E	No

= Unsatisfactory Level of Service

<sup>1</sup> Delay in Seconds<sup>2</sup> Level of Service

NB= Northbound, SB=Southbound, EB=Eastbound, WB=Westbound



The City's General Plan Circulation Element, Exhibit C-4, City's Proposed Bikeway and Community Pedestrian System, shows a Class II on-street bike lane along Barnett Road. The Project would implement proposed bike facilities and provide bike parking on the Project site. The nearest transit stop to the Project site is across Ethanac Road in the City of Perris, Riverside Transit Authority Case FS Perris Crossing for Route 61 bus services, which is located approximately 600 feet to the north of the Project site. The Project would not obstruct or impact the existing transit services or facilities. Sidewalks would be constructed along Barnett Road as well. The Project would be consistent with the City's General Plan goals and policies as applicable. Therefore, impacts would be less than significant.

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

**Less than Significant Impact.** CEQA Guidelines section 15064.3 subdivision (b) discusses the use of vehicle miles traveled (VMT) for the impact analysis. The City's guidelines state that the project would result in a significant project generated VMT impact if either of the following conditions are satisfied:

1. The baseline project generated VMT per service population exceeds the County of Riverside General Plan Buildout VMT per service population, or
2. The cumulative project generated VMT per service population exceeds the County of Riverside General Plan Buildout VMT per service population.

The results of Project VMT modeling is summarized in Table T-4. The year 2030 was used for the cumulative analysis, as this is the latest year available from the WRCOG VMT tool. As shown in Table T-4, the Project VMT in the baseline and cumulative scenarios would be less than the County General Plan Buildout VMT. Therefore, the project would have a less than significant VMT impact.

**Table T- 4: VMT Analysis Summary**

Scenario	Project VMT/SP	Threshold <sup>1</sup>	Impact?
Baseline (2022)	24.7	35.3 VMT/SP	No
Cumulative (2030)	27.4		No

VMT/SP = VMT per Service Population (total of population and employment)

<sup>1</sup>Threshold is equal to the County of Riverside General Plan VMT/SP.

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

**Less than Significant Impact.** The Project would include development and operation of two new industrial buildings on the site that would be compatible with the existing zoning and land use. The Project's design would be reviewed by the City during the plan check and permitting process; thus, the geometric design features of the Project site would not result in increased hazards. Three driveways would be provided along Barnett Road, including one shared driveway, and one shared driveway would be provided along Ethanac Road. Drive aisles would extend past the proposed buildings and continue around the west side of the buildings. The shared Ethanac Road driveway would be 45 feet wide, the northern Barnett driveway would be 40 feet wide, the two southern Barnett driveways would be 36 feet wide, and drive aisles would be 30 feet in width. Truck traffic is anticipated to access the site from Ethanac Road, which is a designated truck route. Access and circulation improvements would be designed in compliance with the City's design standards to provide for adequate turning for passenger cars, fire trucks, and delivery trucks.



Additionally, the Project site does not include any visual obstructions that would block sight distance at the driveways or that would prohibit full access in, and out of, the Project area. As noted above, LOS would be satisfactory with implementation of the Project and proposed traffic design features. Thus, trucks and motorists entering and exiting the Project site would be able to do so comfortably, safely, and without undue congestion. As such, Project access and circulation would be adequate, and Project impacts related to hazardous design features would be less than significant.

**d) Result in inadequate emergency access?**

**No Impact.** The proposed Project would develop and operate two new industrial buildings that would be permitted and approved in compliance with existing safety regulations, such as the California Building Code and Fire Code (as integrated as Chapter 8.26 into the City's Municipal Code) to ensure that it would not result in inadequate emergency access.

The proposed construction activities, including equipment and supply staging and storage, would occur within the Project site and would not restrict access of emergency vehicles to the Project site or adjacent areas. During construction, Ethanac Road would remain open to ensure adequate emergency access to the Project area and vicinity. Thus, impacts related to inadequate emergency access during construction activities would not occur.

As described above, operation of the proposed Project would also not result in inadequate emergency access. Direct access to the Project site would be provided from Ethanac Road and Barnett Road. The driveways and on-site circulation constructed by the Project would be evaluated through the City's permitting procedures to meet the City's design standards that provides adequate turning space for passenger cars, fire trucks, and delivery trucks. The proposed Project circulation would also be consistent with the City of Perris's truck route network, which extends along Ethanac Road, with the western terminus at Barnett Road. Truck traffic would utilize Barnett Road to access the Project site and would not require public roadway access beyond that which is designated for truck traffic. The Project is also required to provide fire suppression facilities (e.g., hydrants and sprinklers). The Menifee Fire Department would review the development plans as part of the plan check and permitting procedures to ensure adequate emergency access pursuant to the requirements in Section 503 of the California Fire Code (Title 24, California Code of Regulations, Part 9). As a result, impacts related to inadequate emergency access would not occur.

**Existing Plans, Programs, or Policies**

There are no impact reducing Plans, Programs, or Policies related to transportation that are applicable to the Project.

**Traffic Project Design Features**

PDF T-1: Barnett Road-Case Road/Ethanac Road: Widen and restripe the northbound shared left-thru-right lane to provide an exclusive right-turn lane and a shared thru-left turn lane. To increase intersection safety, install cat tracks pavement markers for all the edges of the dual southbound lane instead of the single cat track currently installed in the middle of the southbound lane turns. Install a "Keep Clear" pavement marking approximately 85 feet beyond the stop line of the 50 feet left turn pocket at Barnett Road/Ethanac Road. This will ensure that the westbound lane traffic does not block traffic waiting to make a SBL given the staggered nature of this intersection.



- PDF T-2: I-215 SB Ramps/Ethanac Road (AM and PM peak hours): Widen and restripe the southbound shared thru-left turn lane to provide an exclusive left-turn lane and a shared thru-right turn lane. Widen and restripe the eastbound approach to add two thru-lanes. Widen and restripe the westbound approach to add a second left-turn lane. In addition, add overlap right-turn phasing during the southbound phase.
- PDF T-3: I-215 NB Ramps/Ethanac Road (AM and PM peak hours): Widen and restripe the northbound shared thru-left turn lane to provide an exclusive left-turn lane and a shared thru-left turn lane. Widen and restripe the eastbound approach to add an exclusive left-turn lane and a thru-lane. Widen and restripe the westbound approach to add three thru-lanes and an exclusive right-turn lane. In addition, add overlap right-turn phasing during the northbound phase.

### **Sources**

City of Menifee. The City of Menifee General Plan Vision 2030. Available at: <https://www.cityofmenifee.us/221/General-Plan>

Trip Generation Analysis and VMT Screening Analysis for Ethanac and Barnett Warehouse Project, Menifee. Prepared by EPD Solutions, Inc. 2022 (EPD 2022A) (Appendix N)

Traffic Impact Analysis for Ethanac and Barnett Warehouse Project, Menifee. Prepared by EPD Solutions, Inc. (EPD 2022B) (Appendix O)



Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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**18. TRIBAL CULTURAL RESOURCES.**

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?**

**No Impact.** As previously mentioned in Section 5, Cultural Resources, the Project site does not contain resources eligible for listing on a register of historical resources. In addition, ground disturbance has occurred on the Project site from construction of the current buildings. Therefore, the proposed Project would not result in an impact to a historical resource.

**b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?**

**Less than Significant Impact with Mitigation Incorporated.**

**Assembly Bill 52**

Chapter 532, Statutes of 2014 (Assembly Bill [AB] 52), requires that Lead Agencies evaluate a project's potential to impact "tribal cultural resources." Such resources include "[s]ites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are eligible for inclusion in the California Register of Historical Resources or



included in a local register of historical resources.” AB 52 also gives lead agencies the discretion to determine, supported by substantial evidence, whether a resource qualifies as a “tribal cultural resource.” Also, per AB 52 (specifically PRC 21080.3.1), Native American consultation is required upon request by a California Native American tribe that has previously requested that the City provide it with notice of such projects.

An archaeological records search was completed in order to identify any previously recorded archaeological sites within the Project boundary or in the immediate vicinity. According to the records search two resources were identified within a one-mile radius, none of which are located on the Project site. The historic sites include a prehistoric core and one historic ranch. Additionally, a review of the Sacred Land File (SLF) by the Native American Heritage Commission (NAHC) was found to be negative for the presence of any sacred sites or Tribal Cultural Resources. Pursuant to the requirements of AB 52, the City sent informational letters about the proposed Project and requests for consultation to each tribe on the City’s list of tribes requesting consultation on September 22, 2021. Responses were received from the following three tribes:

- Pechanga Band of Indians (previously the “Pechanga Band of Luiseño Indians”) responded on October 25, 2021 requesting consultation. Consultation occurred in January 2022 and the City’s standard mitigation measures were provided to the tribes for review. The City sent a follow up to close on October 28, 2022, however, no response was received.
- Rincon Band of Luiseño Indians responded on November 4, 2021 requesting additional information about the Project. The tribe did not request consultation. The City sent additional information to the tribe and no further requests were made. Rincon officially closed on September 9, 2021.
- Agua Caliente Band of Cahuilla Indians responded on November 17, 2021 requesting additional information about the Project. The tribe did not request consultation. The City sent additional information to the tribe and no further requests were made. The City sent a follow up to close on October 28, 2022, however, no response was received.

Mitigation Measure TCR-1 through TCR-8 have been included to require tribal monitoring of initial site clearing (such as pavement removal, grubbing, tree removals) ground-disturbing activities that cause excavation to depths greater than artificial fill into previously undisturbed soils. Additionally, in the event of an inadvertent tribal cultural resource discovery, procedures have been included that shall be followed by the applicant and City.

As described above, the Project site does not contain any historic structures and the Project area has little to no potential for prehistoric sites to be contained within the boundaries of the site. In addition, the entire parcel has been disturbed from previous agricultural activity. Furthermore, the NAHC has not identified any known sacred lands within the Project area or immediate vicinity. As described previously (and included as PPP CUL-1), California Health and Safety Code, Section 7050.5 requires that if human remains are discovered in the Project site, disturbance of the site shall halt and remain halted until the coroner has conducted an investigation. If the coroner determines that the remains are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission. However, as described previously, Mitigation Measure TCR-3 has been included to provide procedures to be followed in the event that potential resources are discovered during grading, excavation, or construction activities. As detailed previously, if the discovered resource(s) appears Native American in origin, a Native American Monitor shall be contacted to evaluate any potential tribal cultural resource(s) and shall have the opportunity to consult on appropriate treatment and curation of these resources. Thus,



impacts related to California Native American tribes would be less than significant with implementation of Mitigation Measure TCR-1 through TCR-8.

### **Existing Plans, Programs, or Policies**

**PPP CUL-1: Human Remains.** Listed previously in Section 5, Cultural Resources.

### **Mitigation Measures**

**TCR-1. Human Remains (consistent with PPP CUL-1).** If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to Public Resource Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within the period specified by law (24 hours). Subsequently, the Native American Heritage Commission shall identify the "most likely descendant." The most likely descendant shall then make recommendations and engage in consultation concerning the treatment of the remains as provided in Public Resources Code Section 5097.98.

**TCR-2. Non-Disclosure of Location Reburials.** It is understood by all parties that unless otherwise required by law, the site of any reburial of Native American human remains or associated grave goods shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, pursuant to the specific exemption set forth in California Government Code 6254 (r), parties, and Lead Agencies, will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code 6254 (r).

**TCR-3. Inadvertent Archeological Find.** If during ground disturbance activities, unique cultural resources are discovered that were not assessed by the archaeological report(s) and/or environmental assessment conducted prior to project approval, the following procedures shall be followed. Unique cultural resources are defined, for this condition only, as being multiple artifacts in close association with each other, but may include fewer artifacts if the area of the find is determined to be of significance due to its sacred or cultural importance as determined in consultation with the Native American Tribe(s).

- a) All ground disturbance activities within 100 feet of the discovered cultural resources shall be halted until a meeting is convened between the developer, the archaeologist, the tribal representative(s) and the Community Development Director to discuss the significance of the find.
- b) At the meeting, the significance of the discoveries shall be discussed and after consultation with the tribal representative(s) and the archaeologist, a decision shall be made, with the concurrence of the Community Development Director, as to the appropriate mitigation (documentation, recovery, avoidance, etc.) for the cultural resources.
- c) Grading of further ground disturbance shall not resume within the area of the discovery until an agreement has been reached by all parties as to the appropriate mitigation. Work shall be allowed to continue outside of the buffer area and will be monitored by additional Tribal monitors if needed.
- d) Treatment and avoidance of the newly discovered resources shall be consistent with the Cultural Resources Management Plan and Monitoring Agreements entered into with the appropriate tribes. This may include avoidance of the cultural resources through project



design, in-place preservation of cultural resources located in native soils and/or re-burial on the Project property so they are not subject to further disturbance in perpetuity as identified in Non-Disclosure of Reburial Condition.

- i. If the find is determined to be significant and avoidance of the site has not been achieved, a Phase III data recovery plan shall be prepared by the Project Archaeologist, in consultation with the Tribe, and shall be submitted to the City for their review and approval prior to implementation of the said plan.
- ii. Pursuant to California Public Resources Code Section 21083.2(b) avoidance is the preferred method of preservation for archaeological resources and cultural resources. If the landowner and the Tribe(s) cannot agree on the significance or the mitigation for the archaeological or cultural resources, these issues will be presented to the City Community Development Director for decision. The City Community Development Director shall make the determination based on the provisions of the California Environmental Quality Act with respect to archaeological resources, recommendations of the Project Archaeologist and shall take into account the cultural and religious principles and practices of the Tribe. Notwithstanding any other rights available under the law, the decision of the City Community Development Director shall be appealable to the City Planning Commission and/or City Council."

**TCR-4. Cultural Resources Disposition.** In the event that Native American cultural resources are discovered during the course of grading (inadvertent discoveries), the following procedures shall be carried out for final disposition of the discoveries:

- a) One or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be provided to the City of Menifee Community Development Department:
  - i. Preservation-In-Place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving them in the place where they were found with no development affecting the integrity of the resources.
  - ii. Reburial of the resources on the Project property. The measures for reburial shall include, at least, the following: Measures and provisions to protect the future reburial area from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been completed, with an exception that sacred items, burial goods and Native American human remains are excluded. Any reburial process shall be culturally appropriate. Listing of contents and location of the reburial shall be included in the confidential Phase IV report. The Phase IV Report shall be filed with the City under a confidential cover and not subject to Public Records Request.
  - iii. If preservation in place or reburial is not feasible then the resources shall be curated in a culturally appropriate manner at a Riverside County curation facility that meets State Resources Department Office of Historic Preservation Guidelines for the Curation of Archaeological Resources ensuring access and use pursuant to the Guidelines. The collection and associated records shall be transferred, including title, and are to be accompanied by payment of the fees necessary for permanent curation. Evidence of curation in the form of a letter from the curation facility stating that subject archaeological materials have been received and that all fees have been paid, shall be provided by the landowner to the City. There shall be no destructive or invasive testing on sacred items, burial goods and Native American human remains. Results concerning finds of any inadvertent discoveries shall be included in the Phase IV monitoring report.



**Prior to Grading Permit Issuance**

**TCR-5. Archeologist Retained.** Prior to issuance of a grading permit the project applicant shall retain a Riverside County qualified archaeologist to monitor all ground disturbing activities in an effort to identify any unknown archaeological resources.

The Project Archaeologist and the Tribal monitor(s) shall manage and oversee monitoring for all initial ground disturbing activities and excavation of each portion of the project site including clearing, grubbing, tree removals, mass or rough grading, trenching, stockpiling of materials, rock crushing, structure demolition and etc. The Project Archaeologist and the Tribal monitor(s), shall have the authority to temporarily divert, redirect or halt the ground disturbance activities to allow identification, evaluation, and potential recovery of cultural resources in coordination with any required special interest or tribal monitors.

The developer/permit holder shall submit a fully executed copy of the contract to the Community Development Department to ensure compliance with this condition of approval. Upon verification, the Community Development Department shall clear this condition.

In addition, the Project Archaeologist, in consultation with the Consulting Tribe(s), the contractor, and the City, shall develop a Cultural Resources Management Plan (CRMP) in consultation pursuant to the definition in AB 52 to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the project site. A consulting tribe is defined as a tribe that initiated the AB 52 tribal consultation process for the Project, has not opted out of the AB 52 consultation process, and has completed AB 52 consultation with the City as provided for in California Public Resources Code Section 21080.3.2(b)(1) of AB 52. Details in the Plan shall include:

- a) Project grading and development scheduling;
- b) The Project Archaeologist and the Consulting Tribes(s) shall attend the pre-grading meeting with the City, the construction manager and any contractors and will conduct a mandatory Cultural Resources Worker Sensitivity Training to those in attendance. The Training will include a brief review of the cultural sensitivity of the Project and the surrounding area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. All new construction personnel that will conduct earthwork or grading activities that begin work on the Project following the initial Training must take the Cultural Sensitivity Training prior to beginning work and the Project Archaeologist and Consulting Tribe(s) shall make themselves available to provide the training on an as-needed basis;
- c) The protocols and stipulations that the contractor, City, Consulting Tribe(s) and Project archaeologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation.

**TCR-6. Native American Monitoring (Pechanga).** Tribal monitor(s) shall be required on-site during all ground-disturbing activities, including grading, stockpiling of materials, engineered fill, rock crushing, etc. The land divider/permit holder shall retain a qualified tribal monitor(s) from the Pechanga Band of Luiseno Indians. Prior to issuance of a grading permit, the developer shall submit a copy of a signed contract between the above-mentioned Tribe and the land divider/permit holder for the monitoring of the project to the Community Development Department and to the



Engineering Department. The Tribal Monitor(s) shall have the authority to temporarily divert, redirect or halt the ground-disturbance activities to allow recovery of cultural resources, in coordination with the Project Archaeologist.

**TCR-7. Native American Monitoring (Soboba).** Tribal monitor(s) shall be required on-site during all ground-disturbing activities, including grading, stockpiling of materials, engineered fill, rock crushing, etc. The land divider/permit holder shall retain a qualified tribal monitor(s) from the Soboba Band of Luiseno Indians. Prior to issuance of a grading permit, the developer shall submit a copy of a signed contract between the above-mentioned Tribe and the land divider/permit holder for the monitoring of the project to the Community Development Department and to the Engineering Department. The Native American Monitor(s) shall have the authority to temporarily divert, redirect or halt the ground-disturbance activities to allow recovery of cultural resources, in coordination with the Project Archaeologist.

#### **Prior to Final Occupancy**

**TCR-8. Archeology Report - Phase III and IV.** Prior to final inspection, the developer/permit holder shall prompt the Project Archaeologist to submit two (2) copies of the Phase III Data Recovery report (if required for the Project) and the Phase IV Cultural Resources Monitoring Report that complies with the Community Development Department's requirements for such reports. The Phase IV report shall include evidence of the required cultural/historical sensitivity training for the construction staff held during the pre-grade meeting. The Community Development Department shall review the reports to determine adequate mitigation compliance. Provided the reports are adequate, the Community Development Department shall clear this condition. Once the report(s) are determined to be adequate, two (2) copies shall be submitted to the Eastern Information Center (EIC) at the University of California Riverside (UCR) and one (1) copy shall be submitted to the Consulting Tribe(s) Cultural Resources Department(s).

#### **Sources**

Brian F Smith and Associates. Phase I Cultural Resources Study for the Ethanac Business Center Project (BFSA CUL 2022). (See Appendix D)

Governor's Office of Planning and Research (OPR). Tribal Consultation Guidelines, Supplement to General Plan Guidelines. November 14, 2005. Available at: <http://nahc.ca.gov/wp-content/uploads/2019/04/SB-18-Tribal-Consultation-Guidelines.pdf>



	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b><u>19. UTILITIES AND SERVICE SYSTEMS.</u></b>				
Would the project:				
a) Require or result in the relocation or construction of new or expanded water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a) Require or result in the relocation or construction of new or expanded water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

#### **Less than Significant Impact.**

##### **Water Infrastructure**

The proposed Project is within an urbanized, developed area of Menifee. An existing 12-inch water line runs north-south along Barnett Road, which is adjacent to the Project site. The Project would install new onsite domestic water and fire service lines that would connect to the existing line in Barnett Road. Because the site has been planned for operation of industrial uses, the water line has been planned to accommodate development of the Project site and would not require expansion to serve the proposed Project.

Therefore, although construction of the onsite water lines would be required to support the new development, no extensions or expansions to the water pipelines supplying the Project site would be required. The necessary installation of the onsite water supply line is included as part of the proposed Project and would not result in any physical environmental effects beyond those identified in other sections of this IS/MND. Thus, the proposed Project would not result in the construction of



new water facilities or expansion of existing facilities that serve the Project area, the construction of which could cause significant environmental effects, and impacts would be less than significant.

### **Wastewater Treatment**

The Project would connect to the existing 42-inch sewer line located in Barnett Road, which is adjacent to the Project site. Because the site has been planned for operation of industrial uses, the sewer line has been planned to accommodate development of the Project site and would not require expansion to serve the proposed Project. The necessary installation of the onsite sewer line is included as part of the proposed Project and would not result in any physical environmental effects beyond those identified in other sections of this IS/MND.

### **Stormwater Drainage**

The Project proposes a series of MWS to treat stormwater runoff from the Project site. The Project would install new storm drains and catch basins that would convey runoff to the adjacent flood channel and proposed storm drain facilities in Barnett Road. Stormwater runoff would be routed to landscaped areas to slow and infiltrate stormwater runoff wherever feasible to slow and infiltrate additional flows resulting from the Project.

The adjacent flood channel and proposed storm drains would have sufficient capacity to accommodate flows from the proposed Project. Thus, the Project would not require or result in the construction of new offsite stormwater drainage facilities or expansion of existing offsite facilities, the construction of which could cause significant environmental effects. The required installation of onsite drainage features is included as part of the proposed Project and would not result in any physical environmental effects beyond those identified in other sections of this IS/MND. Overall, impacts related to stormwater drainage facilities would be less than significant.

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

**Less than Significant Impact.** As discussed above, water supplies to the Project site are provided by EMWD. According to the Eastern Municipal Water District 2020 Urban Water Management Plan (UWMP), EMWD receives water supplies from four sources: imported water from the Metropolitan Water District of Southern California (MWD), local groundwater, desalinated groundwater, and recycled water. Further, through a combination of these resources EMWD indicates that the agency has the ability to meet current and projected water demands through 2045 during normal, historic single-dry and historic multiple-dry year periods (UWMP 2020).

In 2020, EMWD had a retail water demand of 84,673-acre feet (AF) and projects a retail demand of 102,600 AF in 2025 (a 21 percent increase). The UWMP projects continued growth in retail demand through 2045, when demand is projected to be 123,000 AF (UWMP 2020). The Project site has a General Plan Land Use designation of Economic Development Corridor. The proposed Project is consistent with the land use designations for the site and would be developed below the maximum FAR; therefore the existing growth projections included in the UWMP. Therefore, the proposed Project would have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years, and impacts would be less than significant.



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

**Less than Significant Impact.** EMWD provides wastewater treatment to the Project area. EMWD has four wastewater treatment facilities located throughout its service area that are interconnected to provide for operational flexibility, improved reliability, and deliveries of recycled water. The Perris Valley Raw Water Reclamation Facility (PVRWRF) is closest to the Project site and has a treatment capacity of 26,900 acre-feet per year (AFY). In 2020, the PVRWRF treated 15,696 AFY of wastewater.

The EMWD has previously used wastewater generation rates for industrial uses of approximately 1,700 gallons per day (gpd) per acre (EMWD 2006). Based on this value, wastewater generated by the Project would be approximately 23,613 gpd (26.47 AFY).

Under existing conditions, the PVRWRF has an excess treatment capacity of approximately 11,204 AFY (9,995,659 gpd). As such, implementation of the Project would utilize approximately 0.24 percent of the PVRWRF daily excess treatment capacity. Thus, the wastewater treatment plant has ample capacity, and the Project would not create the need for any new or expanded wastewater facility (such as conveyance lines, treatment facilities, or lift stations) to serve the proposed Project. Therefore, impacts related to wastewater infrastructure would be less than significant.

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

**Less than Significant Impact.** The Project would generate solid waste during the temporary, short-term construction phase, as well as during the operational phase. According to the Menifee General Plan EIR, in 2011, 99 percent of the solid waste collected in Menifee is disposed of at El Sobrante Landfill in Corona and Badlands Sanitary Landfill in Moreno Valley (City of Menifee 2013).

The El Sobrante Sanitary Landfill is permitted to accept 16,054 tons per day of solid waste and is permitted to operate through 2051 (CalRecycle 2022B). The Badlands Sanitary Landfill is permitted to accept 4,800 tons per day of solid waste and is permitted to operate through 2026 (Calrecycle 2022C). As of August 2022, El Sobrante Landfill had an average disposal of 10,710 tons per day and an average remaining capacity of 5,344 tons per day and Badlands Landfill had an average disposal of 2,656 tons per day and an average remaining capacity of 2,144 tons per day (CalRecycle 2022B, CalRecycle C).

The CalEEMod solid waste generation rate for a warehouse/manufacturing land use is 1.42 tons per year per 100 square feet (CalRecycle 2022A). Thus, the proposed Project would generate approximately 3,566 tons of solid waste per year. However, at least 75 percent of the solid waste is required by AB 341 to be recycled, which would reduce the volume of landfilled solid waste to approximately 891 tons per year or 17 tons per week.

As described above, the El Sobrante Landfill has additional capacity of approximately 5,344 tons per day, thus the facility would be able to accommodate the addition of 17 tons of waste per week from the Project. The Badlands Sanitary Landfill has additional capacity of approximately 2,144 tons per day, thus the facility would be able to accommodate the addition of 17 ton of waste per week from the Project as well. Therefore, the El Sobrante Sanitary Landfill and/or the Badlands Landfill would be able to accommodate solid waste from operation of the proposed Project, and impacts related to landfill capacity would be less than significant.



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

**No Impact.** The proposed Project would result in new development that would generate an increased amount of solid waste. All solid waste-generating activities within the City are subject to the requirements set forth in Section 5.408.1 of the 2019 California Green Building Standards Code that requires demolition and construction activities to recycle or reuse a minimum of 65 percent of the nonhazardous construction and demolition waste, and AB 341 that requires diversion of a minimum of 75 percent of operational solid waste.

In addition, the proposed Project would be required to comply with all federal, State, and local regulations related to solid waste. Furthermore, the proposed Project would comply with all standards related to solid waste diversion, reduction, and recycling during Project construction and operation. Therefore, the proposed Project is anticipated to result in less than significant impacts related to potential conflicts with federal, State, and local management and reduction statutes and regulations pertaining to solid waste.

**Existing Plans, Programs, or Policies**

There are no impact reducing Plans, Programs, or Policies related to utilities and service systems that are applicable to the Project.

**Mitigation Measures**

No mitigation measures related to utilities and service systems are required.

**Sources**

CalRecycle. Estimated Solid Waste Generation Rates. Accessed 2022. (CalRecycle 2022A). Available at: <https://www2.calrecycle.ca.gov/wastecharacterization/general/rates>

CalRecycle 2022. SWIS Facility/Site Activity Details - El Sobrante Landfill (33-AA-0217). Accessed 2022. (CalRecycle 2022B) Available at: <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2280?siteID=2402>

CalRecycle 2022. SWIS Facility/Site Activity Details - Badlands Sanitary Landfill (33-AA-0006). Accessed 2022. (CalRecycle 2022C). Available at: <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2245?siteID=2367>

City of Menifee. 2013. Draft Environmental Impact Report. Accessed 2022 (CalRecycle 2022 C). Available at: <https://www.cityofmenifee.us/262/Environmental-Impact-Report>

Eastern Municipal Water District. 2006. Sanitary Sewer System Planning and Design. Available at: [https://www.emwd.org/sites/main/files/fileattachments/emwdsewer\\_system\\_design.pdf?1542760914](https://www.emwd.org/sites/main/files/fileattachments/emwdsewer_system_design.pdf?1542760914)

Eastern Municipal Water District. 2020 Urban Water Management Plan. Available at: [https://www.emwd.org/sites/main/files/file-attachments/urbanwatermanagementplan\\_0.pdf?1625160721](https://www.emwd.org/sites/main/files/file-attachments/urbanwatermanagementplan_0.pdf?1625160721)



	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>20. WILDFIRES.</b> If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

**No Impact.** According to Cal Fire's Fire Hazard Severity Zone Map, the Project site is not located within a Moderate, High, or Very High fire severity zone and Exhibit S-8 of the City's Safety Element shows the site is not located within a Very High Fire Hazard Severity Zone of State or Local Responsibility. Direct access to the Project site would be from one driveway along Ethanac Road and three driveways along Barnett Road. According to Exhibit S-9 in the City's Safety Element, Ethanac Road is designated as an evacuation route. The proposed Project would not result in any impacts to Ethanac Road and it would remain as part of the City's evacuation routes. Additionally, the Project would be required to design and construct internal access and provide fire suppression facilities (e.g., hydrants and sprinklers) in conformance with the City's Municipal Code, and the Fire Department would review the development plans prior to approval to ensure adequate emergency access pursuant to the requirements in Section 503 of the California Fire Code (Title 24, California Code of Regulations, Part 9), included in the City's Municipal Code (Chapter 8.20, Fire Code). As a result, the proposed Project would not impair an adopted emergency response plan or emergency evacuation plan, and no impacts would occur.



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

**No Impact.** As described in the previous response, the Project site is not located within a Fire Hazard Severity Zone. The areas within the Project's vicinity also do not contain hillsides or other factors that could exacerbate wildfire risks. Therefore, no impacts would occur.

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

**No Impact.** As described in the previous responses, the Project site is not within a Fire Hazard Severity Zone. The Project site is located within a developing area within the City of Menifee. The Project would not involve any new infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risks or result in other impacts to the environment. Therefore, no impacts would occur.

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

**No Impact.** As described in the previous responses, the Project site is not within a Fire Hazard Severity Zone. In addition, adjacent areas to the Project site are relatively flat and vacant sites that do not contain hillsides or other factors that would expose people or structures to flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes. In addition, the Project would not generate large slopes and would connect to existing drainage facilities. Thus, the Project would not result in risks related to wildfires or risks related to downslope or downstream flooding or landslides after wildfires. Therefore, no impacts would occur.

### **Existing Plans, Programs, or Policies**

There are no impact reducing Plans, Programs, or Policies related to wildfires that are applicable to the Project.

### **Mitigation Measures**

No mitigation measures related to wildfires are required.

### **Sources**

Cal Fire. Fire Hazard Severity Zone Map. 2022. Available at:  
<https://egis.fire.ca.gov/FHSZ/>

City of Menifee. Safety Element. Exhibits S-8 and S-9. Available at:  
<https://www.cityofmenifee.us/222/Safety-Element>



**21. MANDATORY FINDINGS OF SIGNIFICANCE.**

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

**Less than Significant.** As discussed in previous sections of this IS/MND, the Project site is currently undeveloped and proposes to construct two new industrial buildings that would total 251,133 SF. The Project would not substantially impact any scenic vistas, scenic resources, or the visual character of the area, as discussed in Section **Error! Reference source not found.**, Aesthetics, and would not result in excessive light or glare. The biological field survey conducted for the Project did not identify habitat for any plant or animal species present on the Project site, except the burrowing owl. As discussed above, the Project would be required to conduct 30-day preconstruction surveys for the presence of burrowing owls. With implementation of Mitigation Measure BIO-1, the Project would have a less than significant impact on sensitive animal species. Additionally, the Project site contains trees and shrubs that could be used as habitat for nesting birds. With implementation of Mitigation Measure BIO-2, the Project would result in less than significant impacts on biological resources.

The site does not contain any historic resources, and the potential for the Project site to contain any archaeological resources is low. However, PPP CUL-1 has been included to provide procedures to be followed in the event that potential human remains are discovered during grading, excavation, or construction activities. Therefore, impacts related to important examples of the major periods of California history or prehistory would be less than significant. The environmental analysis provided



in Section **Error! Reference source not found.**, Air Quality, concludes that impacts related to emissions of criteria pollutants and other air quality impacts would be less than significant. Section **Error! Reference source not found.**, Geology and Soils, and Section **Error! Reference source not found.**, Hazards and Hazardous Materials, conclude that impacts related to GHG emissions, hydrology, and water quality would be less than significant. Based on the preceding analysis of potential impacts in the responses to items 1 thru 20, no evidence is presented that the Proposed Project would degrade the quality of the environment. Impacts related to degradation of the environment and cultural resources would be less than significant with mitigation incorporation.

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

**Less than Significant Impact.** Cumulative impacts can result from the interactions of environmental changes resulting from one Proposed Project with changes resulting from other past, present, and future projects that affect the same resources, utilities and infrastructure systems, public services, transportation network elements, air basin, watershed, or other physical conditions. Such impacts could be short-term and temporary, usually consisting of overlapping construction impacts, as well as long term, due to the permanent land use changes and operational characteristics involved with the Project. The Project would develop an undeveloped vacant site with two new industrial buildings. As described above, all of the potential impacts related to implementation of the Project would be less than significant or reduced to a less than significant level with implementation of mitigation measures and existing plans, programs, or policies that are imposed by the City and effectively reduce environmental impacts.

The cumulative effect of the proposed Project taken into consideration with these other development projects in the area would be limited, because the Project would be consistent with the City's General Plan and Municipal Code and would not result in substantial effects to any environmental resource topic, as described throughout this document. Thus, impacts to environmental resources or issue areas would not be cumulatively considerable, and cumulative impacts would be less than significant.

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

**Less than Significant with Mitigation Incorporated.** The Project consists of development of an undeveloped vacant site. The Project would not consist of any use or any activities that would result in a substantial negative effect on any persons in the vicinity. All resource topics associated with the Project have been analyzed in accordance with CEQA and the CEQA Guidelines and were found to pose no impacts, less than significant impacts, or less than significant impacts with mitigation, as previously detailed. Consequently, the Project would not result in any environmental effects that would cause substantial adverse effects on human beings directly or indirectly, with implementation of the mitigation measures that have been previously detailed.



## DOCUMENT PREPARERS AND CONTRIBUTORS

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## Chapter 2. Response to Comments on the Public Review Draft MND

This memo contains responses to the comments that the City of Menifee (Lead Agency) received on the Mitigated Negative Declaration (MND) for the Ethanac and Barnett Warehouse Project during the public review period, which began February 4, 2023, and closed March 6, 2023 (SCH No. 2023020108). Additionally, an appeal of the City of Menifee's March 8, 2023, Planning Commission decision to approve the project was submitted by the City of Perris on March 20, 2023. The City of Perris submitted a supplemental letter on May 3, 2023. This document has been prepared in accordance with California Environmental Quality Act (CEQA) as amended (Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines (Cal. Code Regs., tit. 14, § 15000 et seq.) and represents the independent judgment of the Lead Agency. This document and the circulated MND together comprise the Final MND.

The following public comments were submitted to the City of Menifee during the public review period:

1. Blum Collins & Ho, LLC on behalf of Golden State Environmental Justice Alliance, Received March 3, 2023 (50 pages)
2. City of Perris Development Services Department Planning Division, Received March 6, 2023 (6 pages)

The following public comments were submitted to the City of Menifee following the public review period:

Appeal Letter 1: City of Perris Development Services Department Planning Division, Received March 20, 2023 (30 pages)

Appeal Letter 2: City of Perris Development Services Department Planning Division, Received May 3, 2023 (21 pages)

The public comments and responses to comments are included in the public record and are available to the Lead Agency decision-makers for their review and consideration prior to making their decision. Pursuant to CEQA Statute Section 21155.2(b)(5), none of the comments provide substantial evidence that the project will have significant environmental effects which would require preparation of an Environmental Impact Report. None of this new material indicates that the project will result in a significant environmental impact or an increase in a less than significant impact previously disclosed in the Ethanac and Barnett Warehouse Project MND.

This Response to Comments includes minor revisions to the Public Review Draft MND based upon: (1) clarifications required to prepare a response to a specific comment; and/or (2) typographical errors. These revisions do not alter any impact conclusions that are disclosed in the MND. Revisions to the MND are outlined in Chapter 3, MND Errata.

Although CEQA Statute Section 21155 does not require a Lead Agency to prepare written responses to comments received, the City of Menifee has elected to prepare the following written responses with the intent of conducting a comprehensive and meaningful evaluation of the proposed project. The number designations in the responses are correlated to the bracketed and identified portions of each comment letter.



**Letter 1: Blum Collins & Ho, LLC on behalf of Golden State Environmental Justice Alliance, Received March 3, 2023 (50 pages)**

**BLUM, COLLINS & HO, LLP**

ATTORNEYS AT LAW  
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(213) 572-0400

March 2, 2023

Russell Brown Senior Planner  
City of Menifee  
29844 Haun Road  
Menifee, CA 92586

VIA EMAIL TO:  
[rbrown@cityofmenifee.us](mailto:rbrown@cityofmenifee.us)

*Subject: Comments on Ethanac and Barnett Development Project MND (SCH NO. 2023020108)*

Dear Mr. Brown,

Thank you for the opportunity to comment on the Mitigated Negative Declaration (MND) for the proposed Ethanac and Barnett Development Project. Please accept and consider these comments on behalf of Golden State Environmental Justice Alliance (GSEJA). Also, Golden State Environmental Justice Alliance formally requests to be added to the public interest list regarding any subsequent environmental documents, public notices, public hearings, and notices of determination for this project. Send all communications to Golden State Environmental Justice Alliance P.O. Box 79222 Corona, CA 92877.

1.1

**1.0 Summary**

The project proposes the construction and operation of two industrial warehouse buildings totaling 251,133 square feet (sf) on an approximately 13.89 gross-acre site. Each building is approximately 125,568 sf and includes 10,000 sf of office space. The proposed buildings have a maximum overall height of 45 feet and each building includes 15 dock-high doors and 2 on-grade roll up doors. The project also includes 414 passenger vehicle parking spaces. The Project is anticipated to operate 7 days a week 24 hours a day.

1.2

**3.0 Project Description**

The MND does not include a floor plan, detailed site plan, or a conceptual grading plan. The basic components of a Planning Application include a detailed site plan, floor plan, conceptual grading plan, written narrative, and detailed elevations. Additionally, the site plan provided in Figure 3-1 has been edited to remove pertinent information from public view. For example, it does not provide any detailed information such as earthwork quantity notes, parking requirements, or floor area ratio. Providing the grading plan and earthwork quantity notes is vital as the MND states that

1.3



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“The Project would require the export and import of approximately 17,776 cubic yards of material, and earthwork would be balanced” without providing a grading plan to support this claim. Including a grading plan is vital as it is necessary to calculate the truck hauling trips due to soil import/export during the grading phase of construction. Additionally, only elevations for “Building A” are included in Figure 3-2: Elevations. An EIR must be prepared to include wholly accurate and adequate detailed project site plan, floor plan, grading plan, elevations (for both buildings), and project narrative for public review.

1.3  
cont.

### Environmental Checklist

#### 3. Air Quality, 6. Energy, and 8. Greenhouse Gas Emissions

Please refer to attachments from SWAPE for a complete technical commentary and analysis.

The MND does not include for analysis relevant environmental justice issues in reviewing potential impacts, including cumulative impacts from the proposed project. This is especially significant as the surrounding community is highly burdened by pollution. According to CalEnviroScreen 4.0<sup>1</sup>, CalEPA’s screening tool that ranks each census tract in the state for pollution and socioeconomic vulnerability, the proposed project’s census tract (6065042731) ranks significantly worse in several environmental factors compared to the rest of the state overall. The proposed project’s census tract (6065042731) and surrounding community, including residences to the south and north, bears the impact of multiple sources of pollution and is more polluted than average on several pollution indicators measured by CalEnviroScreen. For example, the project census tract ranks in the 91st percentile for ozone burden, the 51st percentile for particulate matter (PM) 2.5 burden, and the 74th percentile for traffic impacts. All of these environmental factors are typically attributed to heavy truck activity in the area. Ozone can cause lung irritation, inflammation, and worsening of existing chronic health conditions, even at low levels of exposure<sup>2</sup>.

1.4

The census tract also ranks in the 67th percentile for drinking water, which indicates that it ranks with the worst quality drinking water in the state. Poor communities are exposed to contaminants in their drinking water more often than people in other parts of the state<sup>3</sup>.

Further, the census tract is a diverse community including 60% Hispanic, 6% African-American, and 2% Asian-American residents, whom are especially vulnerable to the impacts of pollution. The community has a high rate of low educational attainment, meaning 79% of the

<sup>1</sup> CalEnviroScreen 4.0 <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40>

<sup>2</sup> OEHHA Ozone <https://oehha.ca.gov/calenviroscreen/indicator/air-quality-ozone>

<sup>3</sup> OEHHA Drinking Water <https://oehha.ca.gov/calenviroscreen/drinking-water>



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census tract residents over age 25 has not attained a high school diploma. The community also has a high rate of poverty, meaning 47% of the households in the census tract have a total income before taxes that is less than the poverty level. Income can affect health when people cannot afford healthy living and working conditions, nutritious food and necessary medical care<sup>4</sup>. Poor communities are often located in areas with high levels of pollution<sup>5</sup>. Poverty can cause stress that weakens the immune system and causes people to become ill from pollution<sup>6</sup>. Living in poverty is also an indication that residents may lack health insurance or access to medical care. Medical care is vital for this census tract as it ranks in the 78th percentile for incidence of cardiovascular disease and 49th percentile for incidence of asthma.

1.4  
cont.

Additionally, the census tract adjacent to the project site (6065042901 (north)) is identified as an SB 535 Disadvantaged Community<sup>7</sup>. This indicates that cumulative impacts of development and environmental impacts in the immediate vicinity are disproportionately impacting this community. The negative environmental, health, and quality of life impacts resulting from a saturation of the warehousing and logistics industry in the community have become distinctly inequitable. An EIR must be prepared to include the specific analysis of each environmental impact on the Disadvantaged Community, including cumulative analysis and irreversible environmental effects.

California's Building Energy Code Compliance Software (CBECC) is the State's only approved energy compliance modeling software for non-residential buildings in compliance with Title 24<sup>8</sup>. CalEEMod is not listed as an approved software. The CalEEMod-based modeling in the MND and appendices does not comply with the 2022 Building Energy Efficiency Standards and under-reports the project's significant Energy impacts and fuel consumption to the public and decision makers. Since the MND did not accurately or adequately model the energy impacts in compliance with Title 24, a finding of significance must be made. An EIR with modeling using the approved software (CBECC) must be circulated for public review in order to adequately analyze the project's significant environmental impacts. This is vital as the MND utilizes CalEEMod as a source in its methodology and analysis, which is clearly not the approved software.

1.5

#### 11. Land Use and Planning

The MND does not meaningfully discuss or analyze the project's compliance with the General Plan's Land Use Buildout Scenario. Exhibit LU-4 Land Use Buildout Summary within the

1.6

<sup>4</sup> OEHHA Poverty <https://oehha.ca.gov/calenviroscreen/indicator/poverty>

<sup>5</sup> Ibid.

<sup>6</sup> Ibid.

<sup>7</sup> OEHHA SB 535 Census Tracts <https://oehha.ca.gov/calenviroscreen/sb535>

<sup>8</sup> California Energy Commission 2022 Energy Code Compliance Software <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency-1>



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General Plan Land Use Element<sup>9</sup> projected a 0.40 FAR within EDC-NG and 25,020,987 square feet of non-retail development within all EDC areas. The MND does not provide any information or analysis on the buildout conditions of the General Plan. The MND does not state the floor area ratio of the proposed project. The MND has not provided evidence that the growth generated by the proposed project was anticipated by the General Plan, RTP/SCS, or AQMP. An EIR must be prepared to include this analysis.

1.6  
cont.

#### 14. Population and Housing

The MND utilizes uncertain language and does not provide any meaningful analysis or supporting evidence to substantiate the conclusion that there will be no significant impact to population and housing. The MND states that “the employees that would fill these roles are *anticipated* to come from the *region*, as the unemployment rate of the City of Menifee in July 2022 was 3.9 percent, the City of Perris was 4.8 percent, and the City of Murrieta was at 2.8 percent. Due to these levels of unemployment, it is anticipated that new employees at the Project site would already *reside within commuting distance* and would not generate needs for any housing.” The term “commuting distance” is undefined and indicates that employees will be required to drive long distances from their residence to the project site, which will increase project related VMT. The MND relies upon the unemployment rates of Menifee, Perris, and Murrieta to provide employees for the project, but does not provide evidence that the specific workforce listed is qualified for or interested in industrial work to substantiate this claim. Relying on the unemployed workforce population of the surrounding region will increase project related VMT and emissions during all phases of construction and operations and an EIR must be prepared to account for longer worker trip distances. Additionally, all three cities have unemployment rates that are less than 5%, which is considered full employment and does not substantiate the MND’s claims that impacts will be less than significant.

1.7

The MND states that “According to SCAG, the generation rate for employees required for operation of an industrial project is 1 employee for every 1,195 SF of industrial space. Based on the SCAG employment generation rates, the Project is estimated to generate the need for approximately 210 employees.” However, the MND is misleading and inaccurate in calculating the project’s operational employees utilizing SCAG’s Employment Density Study<sup>10</sup>. SCAG’s Employment Density Study provides the following applicable employment generation rates for Riverside County:

1.8

<sup>9</sup> Menifee General Plan Land Use Element

[https://www.cityofmenifee.us/DocumentCenter/View/14701/FINAL\\_Land-Use-Element\\_11322](https://www.cityofmenifee.us/DocumentCenter/View/14701/FINAL_Land-Use-Element_11322)

<sup>10</sup> SCAG Employment Density Study

<http://www.mwcog.org/file.aspx?A=QTTITR24POOOUIw5mPNzK8F4d8djdJe4LF9Exj6IXOU%3D>



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Warehouse: 1 employee per 581 square feet  
Office: 1 employee per 481 square feet

Applying these ratios results in the following calculation:

Warehouse: 231,133 sf / 581 sf = 398 employees  
Office: 20,000 sf / 481 sf = 42 employees

Total: 440 employees

Utilizing SCAG's Employment Density Study ratios, the proposed project will generate 440 employees. The MND utilizes uncertain and misleading language which does not provide any meaningful analysis of the project's population and employment generation. In order to comply with CEQA's requirements for meaningful disclosure, an EIR must be prepared to provide an accurate estimate of employees generated by all uses of the proposed project. It must also provide demographic and geographic information on the location of qualified workers to fill these positions.

1.8  
cont.

SCAG's Connect SoCal Demographics and Growth Forecast<sup>11</sup> notes that the City will add 15,400 jobs between 2016 - 2045. Utilizing SCAG's Employment Density Study calculation of 440 employees, the project represents 2.8% of the City's employment growth from 2016 - 2045. A single project accounting for this amount of the projected employment growth over 29 years represents a significant amount of growth. An EIR must be prepared to include this analysis, and also provide a cumulative analysis discussion of projects approved since 2016 and projects "in the pipeline" to determine if the project will exceed SCAG's employment growth forecast for the City. For example, other recent industrial projects<sup>12</sup> such as Menifee Commerce Center (2,885 employees), Menifee Commerce Center Phase II (1,962 employees), Northern Gateway Commerce Center (2,267 employees), Ares Warehouse on Murrieta (952 employees), Capstone Industrial (1,205 employees), Wheat Warehouse (151 employees), Corsica Business Park (477 employees), Trumble and Watson Warehouse (571 employees), McLaughlin San Jacinto Warehouses (846 employees), Mapes and Sherman Warehouse (478 employees), United Carports

1.9

<sup>11</sup> SCAG Connect SoCal Demographics and Growth Forecast adopted September 3, 2020  
[https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial\\_demographics-and-growth-forecast.pdf?1606001579](https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial_demographics-and-growth-forecast.pdf?1606001579)

<sup>12</sup> Data for all listed projects via City of Menifee Land Development Projects Map  
<https://cityofmenifee.maps.arcgis.com/apps/instant/minimalist/index.html?appid=55fc56d4eee94e588a28a958ceb908> and Accela Menifee <https://aca-prod.accela.com/MENIFEE/Cap/CapHome.aspx?module=Planning&TabName=Planning&TabList=Home%7C0%7CPermits%7C1%7CEngineering%7C2%7CPlanning%7C3%7CFire%7C4%7CCurrentTabIndex%7C3>



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Warehouse (105 employees), and Motte Business Center (1,964 employees) combined with the proposed project will cumulatively generate 14,548 employees, which is 94.5% of the City's employment growth forecast over 29 years accounted for by only 14 industrial projects submitted since 2020. This number increases exponentially when the City's commercial development activity and other projects since 2016 are added to the calculation. An EIR must be prepared to include a cumulative analysis on this topic in order to provide an adequate and accurate environmental analysis.

1.9  
cont.

The MND does not provide any information or analysis to support the conclusion that the project will not necessitate the construction of housing affordable to the project-related employee's households. The MND utilizes uncertain language in concluding that "should the Project require employees to relocate to the area for work, there is sufficient vacant housing available within the region. The City of Menifee has a vacancy rate of 6.3 percent. The City of Menifee has a total of 38,734 housing units; 36,308 of which are occupied." This is a total of 2,426 vacant units and the MND has not provided any information on the type of available units or if they are affordable to the project's workforce. An EIR must be prepared with this information in order to substantiate the MND's claims that project impacts will be less than significant.

1.10

The MND does not provide any information on the wages generated by the construction or operational jobs in the proposed project. MIT's Living Wage Research Center reports that the living wage for two adults with two children is \$27.25 per hour in Riverside County<sup>13</sup>. This is an annual salary of approximately \$56,680 while MIT reports based on BLS statistics that the average annual salary in Riverside County for the transportation and material moving sector is \$41,687. HCD's area median income (AMI) for a family of four people in Riverside County is \$87,400<sup>14</sup>. 80% of the Riverside County AMI is \$69,920 and the MND has not demonstrated that the project's construction or operational employees will earn an annual salary of at least \$69,920. The MND has not provided evidence that the project will pay wages above 80% of the Riverside County AMI and thus not generate a need for affordable housing. An EIR must be prepared which includes this information for analysis in order to provide an adequate and accurate environmental analysis.

1.11

## 17. Transportation

The MND has misrepresented and underreported the project's VMT impacts. Appendix N - VMT Analysis states that "The City's guidelines require use of the RIVCOM model for preparation of VMT analysis. However, the guidelines specify that routine projects that are simple in nature and

1.12

<sup>13</sup> MIT Living Wage Research Center <https://livingwage.mit.edu/counties/06065>

<sup>14</sup> HCD 2022 Income Limits <https://www.hcd.ca.gov/docs/grants-and-funding/inc2k22.pdf>



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that are similar to other standard land uses in the City and model can use the WRCOG VMT calculator, instead of the RIVCOM model.” However, Appendix N’s statement is misleading to the public and decision makers because the City’s Guidelines<sup>15</sup> state verbatim:

“The VMT Calculator will not replace a full VMT assessment utilizing RIVCOM but may be sufficient to estimate VMT impact for routine projects with similar land use types in the project TAZ. The VMT Calculator can be used to determine if the proposed project is similar in nature to the uses within the project TAZ. If the proposed project land use differs from the assumed land use in a project TAZ, it is not appropriate to assume that a project will result in similar VMT or trip length characteristics, and a full model run would be recommended.”

1.12

The project site is located in TAZ ID 1113, which is bound by Ethanac Rd. to the north, Murrieta Rd. to the west, McLaughlin Rd. to the south, and Barnett Rd. to the east. The TAZ is mostly comprised of vacant land, two storage yards, and two single family residences. The proposed project is unique in that the TAZ in which the Project site is located does not contain any other operational warehouse buildings and is at least 80% vacant land. The VMT analysis does not adequately or accurately represent the VMT impacts of the proposed project and an EIR must be prepared with a project-specific VMT analysis utilizing the WRCOG VMT Calculator. The operational nature of industrial/warehouse uses involves high rates of truck/trailer/delivery VMT

<sup>15</sup> City of Menifee Traffic Impact Analysis Guidelines for Vehicle Miles Traveled Analysis  
<https://www.cityofmenifee.us/DocumentCenter/View/14755/TIA-Guidelines-for-VMT-January-2022-Update>



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due to traveling from large regional distribution centers to smaller industrial parks and then to their final delivery destinations.

1.12  
cont.



Additionally, Appendix N does not include the City's VMT Scoping Form as an attachment for public review, which does not comply with CEQA's requirements for adequate informational documents and meaningful disclosure (CEQA § 15121 and 21003(b)). Incorporation by reference (CEQA § 15150 (f)) is not appropriate as the completed VMT Scoping Form as it contributes directly to analysis of the problem at hand. An EIR must be prepared to provide the completed VMT Scoping Form for review by the public and decision makers.

1.13

Further, the VMT analysis has excluded truck/trailer/delivery van trips from its calculations. There is no source of exemption for truck/trailer/delivery van trips from VMT analysis provided. An EIR must be prepared to include all truck/trailer/delivery van activity for quantified VMT analysis. The operational nature of industrial/warehouse uses involves high rates of truck/trailer/delivery van VMT due to traveling from large regional distribution centers to smaller industrial parks and then to their final delivery destinations. The project's truck/trailer/delivery van activity is unable to utilize public transit or active transportation and it is misleading to the public and decision makers to exclude this activity from VMT analysis. An EIR must be prepared to reflect a

1.14



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quantified VMT analysis that includes all truck/trailer/delivery van activity to adequately and accurately analyze the potentially significant transportation impacts.

1.14  
cont.

The MND has not adequately analyzed the project's potential to substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses; or the project's potential to result in inadequate emergency access. The MND has not provided any exhibits depicting the available truck/trailer turning radius at the northern intersection of the project driveways to determine if there is enough space available to accommodate heavy truck maneuvering, which is notable as Ethanac Road is a truck route. The MND defers this environmental analysis by stating that "The Project's design would be reviewed by the City during the plan check and permitting process; thus, the geometric design features of the Project site would not result in increased hazards." There are also no exhibits depicting emergency vehicle access and the MND also defers this analysis to the permitting phase. Deferring this environmental analysis required by CEQA to the construction permitting phase is improper mitigation and does not comply with CEQA's requirement for meaningful disclosure and adequate informational documents. An EIR must be prepared for the proposed project with this analysis in order to provide an adequate and accurate environmental analysis.

1.15

Notably, Figure 3-1: Conceptual Site Plan depicts that the western project site driveways (truck access points) are not wide enough to accommodate heavy trucks. The driveway area does not provide sufficient space to execute turning maneuvers. As shown on Figure 3-1, the lines that depict each of the 2 trucks (1 truck exiting the site and 1 truck entering the site) overlap on both Barnett Road itself and the project driveway. The overlapping lines mean that if two trucks were to enter and exit the site using the driveway at the same time, they would collide because there is not adequate maneuvering space. A finding of significance must be made as part of an EIR due to this.

1.16

## 21. Mandatory Findings of Significance

An EIR must be prepared to include a cumulative analysis discussion here to demonstrate the impact of the proposed project in a cumulative setting. For example, other recent industrial projects such as such as Menifee Commerce Center (2,885 employees), Menifee Commerce Center Phase II (1,962 employees), Northern Gateway Commerce Center (2,267 employees), Ares Warehouse on Murrieta (952 employees), Capstone Industrial (1,205 employees), Wheat Warehouse (151 employees), Corsica Business Park (477 employees), Trumble and Watson Warehouse (571 employees), McLaughlin San Jacinto Warehouses (846 employees), Mapes and Sherman Warehouse (478 employees), United Carports Warehouse (105 employees), and Motte Business Center (1,964 employees) combined with the proposed project will cumulatively

1.17



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generate 14,548 employees, which is 94.5% of the City's employment growth forecast over 29 years accounted for by only 14 industrial projects submitted since 2020. This total increases exponentially when the City's commercial development activity and other projects since 2016 are added to the calculation. An EIR must be prepared to include this information for analysis and also include a cumulative development analysis of projects approved since 2016 and projects "in the pipeline" to determine if the proposed project exceeds the General Plan growth estimates and/or SCAG's growth forecasts for cumulative analysis.

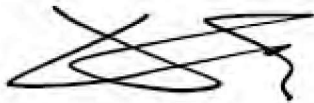
1.17  
cont.

### Conclusion

For the foregoing reasons, GSEJA believes the MND is flawed and an EIR must be prepared for the proposed project and circulated for public review. Golden State Environmental Justice Alliance requests to be added to the public interest list regarding any subsequent environmental documents, public notices, public hearings, and notices of determination for this project. Send all communications to Golden State Environmental Justice Alliance P.O. Box 79222 Corona, CA 92877.

1.18

Sincerely,



Gary Ho  
Blum Collins & Ho, LLP

### Attachments:

1. SWAPE Analysis





Technical Consultation, Data Analysis and  
Litigation Support for the Environment

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March 1, 2023

Gary Ho  
Blum Collins LLP  
707 Wilshire Blvd, Ste. 4880  
Los Angeles, CA 90017

**Subject:** Comments on the Ethanac and Barnett Development Project (SCH No. 2023020108)

Dear Mr. Ho,

We have reviewed the February 2023 Initial Study and Mitigated Negative Declaration ("IS/MND") for the Ethanac and Barnett Development Project ("Project") located in the City of Menifee ("City"). The Project proposes to construct 251,133-square-feet ("SF") of industrial space, 10,000-SF of office space, and 414 parking spaces on the 13.89-acre site.

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Our review concludes that the IS/MND fails to adequately evaluate the Project's air quality, health risk, and greenhouse gas impacts. As a result, emissions and health risk impacts associated with construction and operation of the proposed Project are underestimated and inadequately addressed. An Environmental Impact Report ("EIR") should be prepared to adequately assess and mitigate the potential air quality, health risk, and greenhouse gas impacts that the project may have on the environment.

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## Air Quality

### Failure to Provide Complete CalEEMod Output Files

Land use development projects under the California Environmental Quality Act ("CEQA") typically evaluate air quality impacts and calculate potential criteria air pollutant emissions using the California Emissions Estimator Model ("CalEEMod").<sup>4</sup> CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type. If more specific project information is known, the user

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<sup>4</sup> "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: <https://www.aqmd.gov/caleemod/user's-guide>.



can change the default values and input project-specific values, but CEQA requires that such changes be justified by substantial evidence. Once all of the values are inputted into the model, the Project's construction and operational emissions are calculated, and "output files" are generated. These output files disclose to the reader what parameters are utilized in calculating the Project's air pollutant emissions and make known which default values are changed as well as provide justification for the values selected.

According to the IS/MND, the Project's construction-related and operational emissions were calculated using CalEEMod version 2022.1 (p. 37, 52). However, this poses a problem as the currently available version is a soft-release which fails to provide complete output files.<sup>2</sup> Specifically, the "User Changes to Default Data" table no longer provides the quantitative counterparts to the changes to the default values (see excerpt below) (Appendix A, pp. 139):

#### 8. User Changes to Default Data

Screen	Justification
Land Use	Total Project area is 13.89 acres.
Construction: Construction Phases	Construction anticipated to be completed in 2024.
Construction: Off-Road Equipment	Construction equipment based on equipment used for similar projects in the area.
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, and Building Construction.
Construction: Architectural Coatings	Rule 1113

However, previous versions of CalEEMod, such as 2020.4.0, display the specific numeric changes to the model's default values (see example excerpt below):

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	167.00
tblConstructionPhase	PhaseEndDate	11/22/2023	8/25/2023
tblConstructionPhase	PhaseEndDate	9/27/2023	8/30/2023
tblConstructionPhase	PhaseEndDate	10/25/2023	7/28/2023
tblConstructionPhase	PhaseStartDate	10/26/2023	7/29/2023
tblConstructionPhase	PhaseStartDate	9/28/2023	7/1/2023
tblLandUse	LandUseSquareFeet	160,000.00	160,371.00
tblLandUse	LandUseSquareFeet	119,000.00	41,155.00
tblLandUse	LotAcresage	3.67	3.68
tblLandUse	LotAcresage	2.73	2.74

Thus, the output files associated with CalEEMod Version 2022.1 fail to divulge the exact parameters utilized to calculate Project emissions. To remedy this issue, the IS/MND should have provided access to the model's ".JSON" output files, which allow third parties to review the model's revised input parameters.<sup>3</sup> Without access to the complete output files, including the specific numeric changes to the default values, we cannot verify that the IS/MND's air modeling and subsequent analysis is an accurate

<sup>2</sup> "CalEEMod California Emissions Estimator Model Soft Release." California Air Pollution Control Officers Association (CAPCOA), 2022, available at: <https://caleemod.com/>.

<sup>3</sup> "Video Tutorials for CalEEMod Version 2022.1." California Air Pollution Control Officers Association (CAPCOA), May 2022, available at: <https://www.caleemod.com/tutorials>.



reflection of the proposed Project. As a result, an EIR should be prepared to include an updated air quality analysis that correctly provides the complete output files for CalEEMod Version 2022.1, or includes an updated air model using an older release of CalEEMod.<sup>4</sup>

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### Unsubstantiated Input Parameters Used to Estimate Project Emissions

As previously discussed, the IS/MND relies on CalEEMod Version 2022.1 to estimate the Project's air quality emissions and fails to provide the complete output files required to adequately evaluate model's analysis (p. 52).<sup>5</sup> Regardless, when reviewing the Air Quality Impact Analysis ("AQIA") and the Greenhouse Gas Analysis ("GHG Analysis") provided as Appendix A and Appendix H to the IS/MND, respectively, we were able to identify several model inputs that are inconsistent with information disclosed in the IS/MND. As such, the Project's construction and operation emissions are underestimated. An EIR should be prepared to include an updated air quality analysis that adequately evaluates the impacts that construction and operation of the Project will have on local and regional air quality.

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### Unsubstantiated Changes to Individual Construction Phase Lengths

Review of the CalEEMod output files demonstrates that the "Ethanac & Barnett (Construction – Unmitigated)" model includes the following construction schedule (see excerpt below) (Appendix A, pp. 129; Appendix H, pp. 92):

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase
Site Preparation	Site Preparation	9/5/2023	9/18/2023	5.00	10.0
Grading	Grading	9/19/2023	10/30/2023	5.00	30.0
Building Construction	Building Construction	10/31/2023	9/5/2024	5.00	300
Paving	Paving	7/9/2024	9/5/2024	5.00	20.0
Architectural Coating	Architectural Coating	10/11/2024	9/5/2024	5.00	40.0

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According to the "User Changes to Default Data" table, the justification provided for this schedule is:

"Construction anticipated to be completed in 2024" (Appendix A, pp. 139; Appendix H, pp. 102)

Furthermore, regarding the Project's anticipated construction duration, the AQIA states:

"Construction activities for the Project would occur over one phase and in the following stages: (1) demolition and removal of existing structures, foundations, asphalt/pavement, utilities, and other subsurface improvements; (2) grading and excavation; (3) site preparation, which includes clearing any remaining infrastructure, utilities, and trenching for the new utilities and services; (4) building construction; and (5) landscape installation, paving, and application of architectural coatings. Demolition is expected to begin September 2023 and construction would last through August 2024 (11-month duration). The Project is expected to open in 2024" (p. 13).

<sup>4</sup> "CalEEMod Version 2020.4.0." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: <http://www.aqmd.gov/caleemod/download-model>.

<sup>5</sup> "CalEEMod Version 2022.1.0." California Air Pollution Control Officers Association (CAPCOA), May 2022, available at: <https://www.caleemod.com/>.



However, the changes to the individual construction phase lengths remain unsubstantiated. While the AQIA indicates the total construction duration, the IS/MND fails to mention or justify the *individual* construction phase lengths. This is incorrect, as according to the CalEEMod User's Guide:

"CalEEMod was also designed to allow the user to change the defaults to reflect site- or project-specific information, when available, provided that the information is supported by substantial evidence as required by CEQA."<sup>6</sup>

Here, as the IS/MND only justifies the total construction duration of 11 months, the IS/MND fails to provide substantial evidence to support the revised individual construction phase lengths. As such, we cannot verify the changes. Instead, the model should have proportionately altered all phase lengths to match the proposed construction duration of 11 months.

The construction schedule included in the model presents an issue, as the construction emissions are improperly spread out over a longer period of time for some phases, but not for others. According to the CalEEMod User's Guide, each construction phase is associated with different emissions activities (see excerpt below).<sup>7</sup>

Demolition involves removing buildings or structures.

Site Preparation involves clearing vegetation (grubbing and tree/stump removal) and removing stones and other unwanted material or debris prior to grading.

Grading involves the cut and fill of land to ensure that the proper base and slope is created for the foundation.

Building Construction involves the construction of the foundation, structures and buildings.

Architectural Coating involves the application of coatings to both the interior and exterior of buildings or structures, the painting of parking lot or parking garage striping, associated signage and curbs, and the painting of the walls or other components such as stair railings inside parking structures.

Paving involves the laying of concrete or asphalt such as in parking lots, roads, driveways, or sidewalks.

By disproportionately altering and extending some of the individual construction phase lengths without proper justification, the model assumes there are a greater number of days to complete the construction activities required by the prolonged phases. As a result, there will be less construction activities required per day and, consequently, less pollutants emitted per day. Therefore, until we are able to verify the revised construction schedule, the model may underestimate the peak daily emissions associated with some phases of construction and should not be relied upon to determine Project significance. As such, until a proper source is provided for the individual construction phase lengths, the model should have *proportionately* altered the default phase lengths to match the proposed total construction duration of 11 months.

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<sup>6</sup> "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: <https://www.aqmd.gov/caleemod/user's-guide>, p. 13, 14.

<sup>7</sup> "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: <https://www.aqmd.gov/caleemod/user's-guide>, p. 32.



### Unsubstantiated Reductions to Architectural Coating Emission Factors

Review of the CalEEMod output files demonstrates that the “Ethanac & Barnett (Construction – Unmitigated)” model includes changes to the default architectural coating emission factors (see excerpt below) (Appendix A, pp. 139; Appendix H, pp. 102).

#### 8. User Changes to Default Data

Section	Justification
Land Use	Total Project area is 13.89 acres
Construction: Construction Phases	Construction anticipated to be completed in 2024
Construction: Off-Road Equipment	Construction equipment based on equipment used for similar projects in the area
Construction: Trucks and VMT	Vehicle Miles Adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, and Building Construction
Construction: Architectural Coatings	Rule 1113

As previously mentioned, the CalEEMod User’s Guide requires any changes to model defaults be justified.<sup>8</sup> As demonstrated above, the justification provided for these changes is simply “Rule 1113.” Furthermore, regarding rules and regulations that would apply to the proposed project, the IS/MND states:

“PPP AQ-2: The Project is required to comply with the provisions of South Coast Air Quality Management District (SCAQMD) Rule 113. Only “Low-Volatile Organic Compounds” paints (no more than 50 gram/liter of VOC) and/or High Pressure Low Volume (HPLV) applications shall be used” (p. 41).

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However, these reductions remain unsubstantiated for two reasons.

First, according to PPP AQ-2, the Project would be required to only use paints with a VOC limit of 50 g/L. However, the IS/MND fails to include this requirement as a formal mitigation measure. This is incorrect, as we cannot verify the accuracy of the revised architectural coating emission factors based on SCAQMD Rule 1113 alone. The SCAQMD Rule 1113 Table of Standards provides the required VOC limits (grams of VOC per liter of coating) for 57 different coating categories.<sup>9</sup> The VOC limits for each coating varies from a minimum value of 50 g/L to a maximum value of 730 g/L. As the IS/MND and associated documents fail to explicitly require the use of 50 g/L or less paints as a formal mitigation measure, we are unable to verify the model’s revised emission factors.

Second, as previously discussed, the output files for CalEEMod 2022.1 do not present the numeric changes to any model defaults. Upon further review of the output files, Table 5.5 contains the only mention of architectural coatings (see excerpt below (Appendix A, pp. 131; Appendix H, pp. 94):

<sup>8</sup> “CalEEMod User’s Guide.” California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: <https://www.aqmd.gov/cal-eemod/user-s-guide>, p. 1, 14.

<sup>9</sup> SCAQMD Rule 1113 Advisory Notice.” SCAQMD, February 2016, available at: <http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/r1113.pdf?sfvrsn=24>, p. 1113-14, Table of Standards 1.



5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.08	0.00	109,603	110,695	16,029

However, as demonstrated above, Table 5.5 only references the *square footage* required for architectural coatings. Since the output files fail to demonstrate the architectural coating *emission factors* that the model relies on, we cannot verify that the values included in the model are accurate.

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These unsubstantiated reductions present an issue, as CalEEMod uses the architectural coating emission factors to calculate the Project's reactive organic gas/volatile organic compound ("ROG"/"VOC") emissions.<sup>10</sup> By including unsubstantiated reductions to the default architectural coating emission factors, the model may underestimate the Project's construction-related ROG/VOC emissions and should not be relied upon to determine Project significance.

*Underestimated Saturday and Sunday Operational Vehicle Trip Rates*

According to the Traffic Impact Analysis ("TA") provided as Appendix O to the IS/MND, the proposed Project is expected to generate approximately 506 daily operational vehicle trips (see excerpt below) (p. 23):

Table 6: Project Trip Generation

Land Use	Units	AM Peak Hour				PM Peak Hour			
		Daily	In	Out	Total	In	Out	Total	
<u>Trip Rates</u>									
Manufacturing <sup>1</sup>	TSF	4.75	0.52	0.16	0.68	0.23	0.51	0.74	
Warehouse <sup>2</sup>	TSF	1.71	0.13	0.04	0.17	0.05	0.13	0.18	
<u>Total Vehicle Trip Generation</u>									
Proposed Manufacturing	25,113	TSF	119	13	4	17	6	13	19
Proposed Warehouse	226,020	TSF	386	30	9	38	11	29	41
Total Trip Generation			506	43	13	56	17	42	59
<u>Vehicle Mix<sup>3</sup></u>									
		Percent							
Passenger Vehicles		72.50%	367	31	9	40	12	31	43
2-Axle Trucks		4.60%	23	2	1	3	1	2	3
3-Axle Trucks		5.70%	29	2	1	3	1	2	3
4+-Axle Trucks		17.20%	87	7	2	10	3	7	10
		100%	506	43	13	56	17	42	59

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As such, the Project's models should accurately reflect the above-mentioned operational daily vehicle trip rates. However, review of the CalEEMod output files demonstrates that the "Ethanac & Barnett (Warehouse Operations)" and the "Ethanac & Barnett (Manufacturing Operations)" models include only

<sup>10</sup> "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: <https://www.aqmd.gov/cal-eemod/user-s-guide>, p. 35, 40.



a total of approximately 71 Saturday<sup>14</sup> and 39 Sunday<sup>12</sup> vehicle trips (see excerpt below) (Appendix A, pp. 194; Appendix H, pp. 124).

#### Warehouse Operations

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year
Unrefrigerated Warehouse-No Rail	281	24.6	9.86	75,058
User Defined Industrial	107	9.39	3.74	28,578
Parking Lot	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00

#### Manufacturing Operations

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year
Manufacturing	87.0	27.2	18.1	25,044
User Defined Industrial	33.0	10.3	6.86	9,500

As demonstrated in the excerpts above, the Saturday and Sunday trips are underestimated by a total of approximately 472 trips<sup>13</sup> and 492 trips,<sup>14</sup> respectively. As such, the trip rates inputted into the model are underestimated and inconsistent with the information provided by the IS/MND and associated documents.

These inconsistencies present an issue, as CalEEMod uses the operational vehicle trip rates to calculate the emissions associated with the operational on-road vehicles.<sup>15</sup> By including underestimated weekday, Saturday, and Sunday operational vehicle trips, the model underestimates the Project's mobile-source operational emissions and should not be relied upon to determine Project significance.

#### Diesel Particulate Matter Emissions Inadequately Evaluated

The IS/MND concludes that the proposed Project would result in a less-than-significant health risk impact based on a quantified construction and mobile-source operational health risk assessment

<sup>14</sup> Calculated: Total Saturday Warehouse Operations Vehicle Trips (24.6 unrefrigerated warehouse vehicle trips + 9.39 user defined industrial vehicle trips) + Total Saturday Manufacturing Operations Vehicle Trips (27.2 manufacturing warehouse vehicle trips + 10.3 user defined industrial vehicle trips) = 71.49 Total Saturday Vehicle Trips.

<sup>12</sup> Calculated: Total Saturday Warehouse Operations Vehicle Trips (9.86 unrefrigerated warehouse vehicle + 3.74 user defined industrial vehicle trips) + Total Saturday Manufacturing Operations Vehicle Trips (18.1 manufacturing warehouse vehicle trips + 6.86 user define industrial vehicle trips) = 38.56 Total Sunday Vehicle Trips.

<sup>13</sup> Calculated: 506 proposed vehicle trips – 71 modeled vehicle trips = 435 vehicle trips underestimated.

<sup>14</sup> Calculated: 506 proposed vehicle trips – 39 modeled vehicle trips = 467 vehicle trips underestimated.

<sup>15</sup> "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: <https://www.aqmd.gov/caleemod/user-s-guide>, p. 36.



("HRA"), which is detailed in Mobile Source Health Risk Assessment ("HRA") as Appendix B to the IS/MND. Specifically, the HRA estimates that the maximum cancer risk posed to nearby, existing residential sensitive receptors associated with construction and operation would be 0.63 in one million, which would not exceed the SCAQMD significance threshold of 10 in one million (p. 4, Table ES-3).

TABLE ES-3: SUMMARY OF CONSTRUCTION AND OPERATIONAL CANCER AND NON-CANCER RISKS

Time Period	Location	Maximum Lifetime Cancer Risk (Risk per Million)	Significance Threshold (Risk per Million)	Exceeds Significance Threshold
30 Year Exposure	Maximum Exposed Sensitive Receptor	0.63	10	NO
Time Period	Location	Maximum Hazard Index	Significance Threshold	Exceeds Significance Threshold
Annual Average	Maximum Exposed Sensitive Receptor	≤0.01	1.0	NO

However, the IS/MND's evaluation of the Project's potential health risk impacts, as well as the subsequent less-than-significant impact conclusion, is incorrect for two reasons.

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First, the IS/MND's operational HRA underestimates the Fraction of Time At Home ("FAH") values. Specifically, the HRA utilizes an FAH value of 0.85 for the third trimester (age -0.25 to 0) and infant (age 0 to 2) receptors, and an FAH value of 0.72 for the child receptors (age 2 to 16) (see excerpts below) (Appendix C-2, p. 19, 20, Table 2-7).

TABLE 2-7: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK (30 YEAR RESIDENTIAL)

Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Fraction of Time at Home	Exposure Frequency (days/year)	Exposure Time (hours/day)
-0.25 to 0	361	10	0.25	0.85	350	24
0 to 2	1,090	10	2	0.85	350	24

Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Fraction of Time at Home	Exposure Frequency (days/year)	Exposure Time (hours/day)
2 to 16	572	3	14	0.72	350	24
16 to 30	261	1	14	0.73	350	24



However, the FAH values used for the third trimester, infant, and childhood receptors are incorrect, as SCAQMD guidance clearly states:

“For Tiers 1, 2, and 3 screening purposes, the FAH is assumed to be 1 for ages third trimester to 16. As a default, children are assumed to attend a daycare or school in close proximity to their home and no discount should be taken for time spent outside of the area affected by the facility’s emissions. People older than age 16 are assumed to spend only 73 percent of their time at home.”<sup>16</sup>

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As stated above, per SCAQMD guidance, the operational HRA should have relied on an FAH value of 1 for the third trimester, infant, and child receptors. By utilizing incorrect FAH values, the IS/MND underestimates the cancer risk posed to nearby, existing sensitive receptors as a result of Project operation.

Second, further review demonstrates that the HRAs may fail to include Age Sensitivity Factors (“ASFs”). Regarding ASFs, OEHHA guidance states:

“Studies have shown that young animals are more sensitive than adult animals to exposure to many carcinogens (OEHHA, 2009). Therefore, OEHHA developed age sensitivity factors (ASFs) to take into account the increased sensitivity to carcinogens during early-in-life exposure (Table 8.3). These factors were developed and described in detail in OEHHA (2009). In the absence of chemical-specific data, OEHHA recommends a default ASF of 10 for the third trimester to age 2 years, and an ASF of 3 for ages 2 through 15 years to account for potential increased sensitivity to carcinogens during childhood.”

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However, while the HRA includes ASFs in the exposure assumption tables, the equation to produce carcinogenic risk estimates, as shown below, is incorrect and underestimated (p. 21).

$$\text{RISKair} = \text{DOSEair} \times \text{CPF} \times \text{ED/AT}$$

Where:

DOSEair	=	chronic daily intake (mg/kg/day)
CPF	=	cancer potency factor
ED	=	number of years within particular age group
AT	=	averaging time

Instead, the HRA Report should have used the following equation that includes ASFs:

<sup>16</sup> “Risk Assessment Procedures.” SCAQMD, August 2017, available at: [http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1401/riskassessmentprocedures\\_2017\\_080717.pdf](http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1401/riskassessmentprocedures_2017_080717.pdf), p. 7.



$$Cancer\ Risk_{AIR} = Dose_{AIR} \times CPF \times ASF \times FAH \times \frac{ED}{AT}$$

Thus, by potentially failing to include ASF values in the carcinogenic risk estimate equation, the IS/MND's HRA underestimate the cancer risk posed to nearby, existing sensitive receptors as a result of Project construction and operation. As such, an EIR should be prepared to include an updated analysis correctly accounting for ASF values.

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#### Disproportionate Health Risk Impacts of Warehouses on Surrounding Communities

Upon review of the IS/MND, we have determined that the development of the proposed Project would result in disproportionate health risk impacts on community members living, working, and going to school within the immediate area of the Project site. According to the SCAQMD:

"Those living within a half mile of warehouses are more likely to include communities of color, have health impacts such as higher rates of asthma and heart attacks, and a greater environmental burden."<sup>17</sup>

In particular, the SCAQMD found that more than 2.4 million people live within a half mile radius of at least one warehouse, and that those areas not only experience increased rates of asthma and heart attacks, but are also disproportionately Black and Latino communities below the poverty line.<sup>18</sup> Another study similarly indicates that "neighborhoods with lower household income levels and higher percentages of minorities are expected to have higher probabilities of containing warehousing facilities."<sup>19</sup> Additionally, a report authored by the Inland Empire-based People's Collective for Environmental Justice and University of Redlands states:

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"As the warehouse and logistics industry continues to grow and net exponential profits at record rates, more warehouse projects are being approved and constructed in low-income communities of color and serving as a massive source of pollution by attracting thousands of polluting truck trips daily. Diesel trucks emit dangerous levels of nitrogen oxide and particulate matter that cause devastating health impacts including asthma, chronic obstructive pulmonary disease (COPD), cancer, and premature death. As a result, physicians consider these pollution-burdened areas 'diesel death zones.'"<sup>20</sup>

<sup>17</sup> "South Coast AQMD Governing Board Adopts Warehouse Indirect Source Rule." SCAQMD, May 2021, *available at*: <http://www.aqmd.gov/docs/default-source/news-archive/2021/board-adopts-waisr-may7-2021.pdf?sfvrsn=9>.

<sup>18</sup> "Southern California warehouse boom a huge source of pollution. Regulators are fighting back." Los Angeles Times, May 2021, *available at*: <https://www.latimes.com/california/story/2021-05-05/air-quality-officials-target-warehouses-bid-to-curb-health-damaging-truck-pollution>.

<sup>19</sup> "Location of warehouses and environmental justice: Evidence from four metros in California." Metro Freight Center of Excellence, January 2018, *available at*: [https://www.metrotrans.org/assets/research/MF%201.1g\\_Location%20of%20warehouses%20and%20environmental%20justice\\_Final%20Report\\_021618.pdf](https://www.metrotrans.org/assets/research/MF%201.1g_Location%20of%20warehouses%20and%20environmental%20justice_Final%20Report_021618.pdf), p. 21.

<sup>20</sup> "Warehouses, Pollution, and Social Disparities: An analytical view of the logistics industry's impacts



It is evident that the continued development of industrial warehouses within these communities poses a significant environmental justice challenge. However, the acceleration of warehouse development is only increasing despite the consequences on public health. The Inland Empire alone is adding 10 to 25 million SF of new industrial space each year.<sup>21</sup>

In April 2022, the American Lung Association ranked Riverside County as the second worst for ozone pollution in the nation.<sup>22</sup> The American Lung Association also reported that Riverside County has a weighted average of 133.3 bad air days for ozone pollution in 2020.<sup>23</sup> Downtown Los Angeles, by comparison, had only 22 ozone violation days in 2020.<sup>24</sup> This year, the County continues to face the second worst ozone pollution, as it has seen the highest recorded Air Quality Index (“AQI”) values for ground-level ozone in California.<sup>25</sup> The U.S. Environmental Protection Agency (“EPA”) indicates that ozone, the main ingredient in “smog,” can cause several health problems, which includes aggravating lung diseases and increasing the frequency of asthma attacks. The U.S. EPA states:

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“Children are at greatest risk from exposure to ozone because their lungs are still developing and they are more likely to be active outdoors when ozone levels are high, which increases their exposure. Children are also more likely than adults to have asthma.”<sup>26</sup>

Furthermore, regarding the increased sensitivity of early-life exposures to inhaled pollutants, the California Air Resources Board (“CARB”) states:

“Children are often at greater risk from inhaled pollutants, due to the following reasons:

- Children have unique activity patterns and behavior. For example, they crawl and play on the ground, amidst dirt and dust that may carry a wide variety of toxicants. They often put their hands, toys, and other items into their mouths, ingesting harmful substances. Compared to adults, children typically spend more time outdoors and are

on environmental justice communities across Southern California.” People’s Collective for Environmental Justice, April 2021, available at:

[https://earthjustice.org/sites/default/files/files/warehouse\\_research\\_report\\_4.15.2021.pdf](https://earthjustice.org/sites/default/files/files/warehouse_research_report_4.15.2021.pdf), p. 4.

<sup>21</sup> “2020 North America Industrial Big Box Review & Outlook.” CBRE, 2020, available at: <https://www.cbre.com/-/media/project/cbre/shared-site/insights/local-responses/industrial-big-box-report-inland-empire/local-response-2020-ibb-inland-empire-overview.pdf>, p. 2.

<sup>22</sup> “State of the Air 2022.” American Lung Association, April 2022, available at: <https://www.lung.org/research/sota/key-findings/most-polluted-places>.

<sup>23</sup> “California: Riverside.” American Lung Association, 2022, available at: <https://www.lung.org/research/sota/city-rankings/states/california/riverside>.

<sup>24</sup> “Southern California warehouse boom a huge source of pollution. Regulators are fighting back.” Los Angeles Times, May 2021, available at: <https://www.latimes.com/california/story/2021-05-05/air-quality-officials-target-warehouses-bid-to-curb-health-damaging-truck-pollution>.

<sup>25</sup> “High Ozone Days.” American Lung Association, 2022, available at: <https://www.lung.org/research/sota/city-rankings/states/california>.

<sup>26</sup> “Health Effects of Ozone Pollution.” U.S. EPA, May 2021, available at: <https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution>.



more physically active. Time outdoors coupled with faster breathing during exercise increases children's relative exposure to air pollution.

- Children are physiologically unique. Relative to body size, children eat, breathe, and drink more than adults, and their natural biological defenses are less developed. The protective barrier surrounding the brain is not fully developed, and children's nasal passages aren't as effective at filtering out pollutants. Developing lungs, immune, and metabolic systems are also at risk.
- Children are particularly susceptible during development. Environmental exposures during fetal development, the first few years of life, and puberty have the greatest potential to influence later growth and development."<sup>27</sup>

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cont.

A Stanford-led study also reveals that children exposed to high levels of air pollution are more susceptible to respiratory and cardiovascular diseases in adulthood.<sup>28</sup> Thus, given children's higher propensity to succumb to the negative health impacts of air pollutants, and as warehouses release more smog-forming pollution than any other sector, it is necessary to evaluate the specific health risk that warehouses pose to children in the nearby community.

According to the above-mentioned study by the People's Collective for Environmental Justice and University of Redlands, there are 640 schools in the South Coast Air Basin that are located within half a mile of a large warehouse, most of them in socio-economically disadvantaged areas.<sup>29</sup> Furthermore, review of Google Earth demonstrates that there is a preschool located approximately 0.67 miles, or 3,534-feet, from the Project site (see excerpt below).

<sup>27</sup> "Children and Air Pollution." California Air Resources Board (CARB), available at: <https://ww2.arb.ca.gov/resources/documents/children-and-air-pollution>.

<sup>28</sup> "Air pollution puts children at higher risk of disease in adulthood, according to Stanford researchers and others." Stanford, February 2021, available at: <https://news.stanford.edu/2021/02/22/air-pollution-impacts-childrens-health/>.

<sup>29</sup> "Warehouses, Pollution, and Social Disparities: An analytical view of the logistics industry's impacts on environmental justice communities across Southern California." People's Collective for Environmental Justice, April 2021, available at: [https://earthjustice.org/sites/default/files/files/warehouse\\_research\\_report\\_4.15.2021.pdf](https://earthjustice.org/sites/default/files/files/warehouse_research_report_4.15.2021.pdf), p. 4.





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cont.

This poses a significant threat because, as outlined above, children are a vulnerable population that are more susceptible to the damaging side effects of air pollution. As such, the Project would have detrimental short-term and long-term health impacts on local children if approved.

An EIR should be prepared to evaluate the disproportionate impacts of the proposed warehouse on the communities adjacent to the Project, including an analysis of the impact on children and people of color who live and attend school in the surrounding area. In order to evaluate the cumulative air quality impact from the several warehouse projects proposed or built in a one-mile radius of the Project site, the EIR should prepare a cumulative health risk assessment ("HRA") to quantify the adverse health outcome from the effects of exposure to multiple warehouses in the immediate area in conjunction with the poor ambient air quality in the Project's census tract.

### Greenhouse Gas

#### Failure to Adequately Evaluate Greenhouse Gas Impacts

The IS/MND estimates that the Project would generate net annual greenhouse gas ("GHG") emissions of 2,985.38 metric tons of carbon dioxide equivalents per year ("MT CO<sub>2</sub>e/year") (p. 120, Table GHG-2).

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**Table GHG- 2: Project Total Net GHG Emissions**

Emission Source	Emissions (MT/yr)				
	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	Refrigerants	Total CO <sub>2</sub> e
Annual construction-related emissions amortized over 30 years	39.97	1.67E-03	2.00E-03	0.04	40.63
Mobile Source	1,797.00	0.04	0.21	2.52	1,864.00
Area Source	5.11	0.00	0.00	0.00	5.52
Energy Source	243.40	0.02	0.00	0.00	244.90
Water Usage	82.44	1.90	0.04	0.00	143.40
Waste	21.79	2.18	0.00	0.00	76.25
Refrigerants	0.00	0.00	0.00	38.38	38.38
On-Site Equipment					572.30
<b>Total CO<sub>2</sub>e (All Sources)</b>	<b>2,985.38</b>				

Source: Appendix H

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cont.

As such, the IS/MND concludes that “[t]he Project would not exceed the SCAQMD’s numeric threshold of 3,000 MTCO<sub>2</sub>e per year and impacts would be less than significant” (p. 120). Furthermore, the IS/MND’s analysis relies upon the Project’s consistency with the CARB’s 2017 *Scoping Plan* to conclude that the Project would result in a less-than-significant GHG impact (p. 121 – 125). However, the IS/MND’s analysis, as well as the subsequent less-than-significant impact conclusion, is incorrect for the following reasons.

- (1) The IS/MND’s quantitative GHG analysis relies upon an outdated threshold;
- (2) The IS/MND’s unsubstantiated air model indicates a potentially significant impact; and
- (3) The IS/MND fails to demonstrate consistency with CARB’s 2017 *Scoping Plan*.

*1) Incorrect Reliance on an Outdated Quantitative GHG Threshold*

As previously stated, the IS/MND estimates that the Project would generate net annual GHG emissions of 2,985.38 MT CO<sub>2</sub>e/year, which would not exceed the SCAQMD threshold of 3,000 MT CO<sub>2</sub>e/year (p. 120, Table GHG-2). However, the guidance that provided the 3,000 MT CO<sub>2</sub>e/year threshold, the SCAQMD’s 2008 *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules, and Plans* report, was developed when the Global Warming Solutions Act of 2006, commonly known as “AB 32”, was the governing statute for GHG reductions in California. AB 32 requires California to reduce GHG emissions to 1990 levels by 2020.<sup>30</sup> Furthermore, AEP guidance states:

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<sup>30</sup> “Health & Safety Code 38550.” California State Legislature, January 2007, available at: [https://leginfo.ca.gov/faces/codes\\_displaySection.xhtml?lawCode=HSC&sectionNum=38550](https://leginfo.ca.gov/faces/codes_displaySection.xhtml?lawCode=HSC&sectionNum=38550).



"[F]or evaluating projects with a post 2020 horizon, the threshold will need to be revised based on a new gap analysis that would examine 17 development and reduction potentials out to the next GHG reduction milestone."<sup>31</sup>

As it is currently March 2023, thresholds for 2020 are not applicable to the proposed Project and should be revised to reflect the current GHG reduction target. As such, the SCAQMD bright-line threshold of 3,000 MT CO<sub>2</sub>e/year is outdated and inapplicable to the proposed Project, and the IS/MND's less-than-significant GHG impact conclusion should not be relied upon. Instead, we recommend that the Project apply the SCAQMD 2035 service population efficiency target of 3.0 metric tons of carbon dioxide equivalents per service population per year ("MT CO<sub>2</sub>e/SP/year"), which was calculated by applying a 40% reduction to the 2020 targets.<sup>32</sup>

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cont.

## 2) Failure to Identify a Potentially Significant GHG Impact

In an effort to quantitatively evaluate the Project's GHG emissions, we compared the Project's GHG emissions, as estimated by the IS/MND, to the SCAQMD 2035 service population efficiency target of 3.0 MT CO<sub>2</sub>e/SP/year, which was calculated by applying a 40% reduction to the 2020 targets.<sup>33</sup> When applying this threshold, the Project's air model indicates a potentially significant GHG impact. As previously stated, the IS/MND estimates that the Project would generate net annual GHG emissions of 2,985.38 MT CO<sub>2</sub>e/year (p. 120, Table GHG-2). According to CAPCOA's *CEQA & Climate Change* report, a service population ("SP") is defined as "the sum of the number of residents and the number of jobs supported by the project."<sup>34</sup> The IS/MND indicates the Project will employ approximately 210 people during operation (p. 156). As the Project does not propose to construct residential land uses, we estimate a SP of 210 people.<sup>35</sup> When dividing the Project's net annual GHG emissions, as estimated by the IS/MND, by a SP of 210 people, we find that the Project would emit approximately 14.2 MT CO<sub>2</sub>e/SP/year (see table below).<sup>36</sup>

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<sup>31</sup> "Beyond Newhall and 2020: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California." Association of Environmental Professionals (AEP), October 2016, available at: [https://califaep.org/docs/AEP-2016\\_Final\\_White\\_Paper.pdf](https://califaep.org/docs/AEP-2016_Final_White_Paper.pdf), p. 39.

<sup>32</sup> "Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #15." SCAQMD, September 2010, available at: [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf), p. 2.

<sup>33</sup> "Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #15." SCAQMD, September 2010, available at: [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf), p. 2.

<sup>34</sup> CAPCOA (Jan. 2008) *CEQA & Climate Change*, p. 71-72, <http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA-White-Paper.pdf>.

<sup>35</sup> Calculated: 0 residents + 210 employees = 210 service population.

<sup>36</sup> Calculated: (2,985.38 MT CO<sub>2</sub>e/year) / (210 service population) = (14.2 MT CO<sub>2</sub>e/SP/year).



IS/MND Greenhouse Gas Emissions	
Annual Emissions (MT CO <sub>2</sub> e/year)	2,985.38
Service Population	210
Service Population Efficiency (MT CO <sub>2</sub> e/SP/year)	14.2
SCAQMD 2035 Threshold	3.0
Exceeds?	Yes

1.31  
cont.

As demonstrated above, the Project's service population efficiency value, as estimated by the IS/MND's provided net annual GHG emission estimates and SP, exceeds the SCAQMD 2035 efficiency target of 3.0 MT CO<sub>2</sub>e/SP/year, indicating a potentially significant impact not previously identified or addressed by the IS/MND. As a result, the IS/MND's less-than-significant GHG impact conclusion should not be relied upon. An EIR should be prepared, including an updated GHG analysis and incorporating additional mitigation measures to reduce the Project's GHG emissions to less-than-significant levels.

### 3) *Failure to Demonstrate Consistency with CARB's 2017 Scoping Plan*

As previously discussed, the IS/MND concludes that the Project would be consistent with CARB's 2017 Climate Change Scoping Plan (p. 121 – 125). However, this is incorrect, as the IS/MND fails to consider the following performance-based measures proposed by CARB.

#### i. *Passenger & Light Duty VMT Per Capita Benchmarks per SB 375*

In reaching the State's long-term GHG emission reduction goals, CARB's 2017 *Scoping Plan* explicitly cites to SB 375 and the VMT reductions anticipated under the implementation of Sustainable Community Strategies.<sup>37</sup> CARB has identified the population and daily VMT from passenger autos and light-duty vehicles at the state and county level for each year between 2010 to 2050 under a "baseline scenario" that includes "current projections of VMT included in the existing Regional Transportation Plans/Sustainable Communities Strategies (RTP/SCSs) adopted by the State's 18 Metropolitan Planning Organizations (MPOs) pursuant to SB 375 as of 2015."<sup>38</sup> By dividing the projected daily VMT by the population, we calculated the daily VMT per capita for each year at the state and county level for 2010 (baseline year), 2025 (Project operational year), and 2030 (target years under SB 32) (see table below).

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<sup>37</sup> "California's 2017 Climate Change Scoping Plan." CARB, November 2017, available at: [https://ww3.arb.ca.gov/cc/scopingplan/scoping\\_plan\\_2017.pdf](https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf), p. 25, 98, 101-103.

<sup>38</sup> "Supporting Calculations for 2017 Scoping Plan-Identified VMT Reductions," California Air Resources Board (CARB), January 2019, available at: <https://ww2.arb.ca.gov/resources/documents/carb-2017-scoping-plan-identified-vmt-reductions-and-relationship-state-climate>; see also: [https://ww2.arb.ca.gov/sites/default/files/2019-01/sp\\_mss\\_vmt\\_calculations\\_jan19\\_0.xlsx](https://ww2.arb.ca.gov/sites/default/files/2019-01/sp_mss_vmt_calculations_jan19_0.xlsx).



2017 Scoping Plan Daily VMT Per Capita			
Year	Population	LDV VMT Baseline	VMT Per Capita
Los Angeles County			
2010	9,838,771	208,377,307	21.17
2025	10,671,800	203,870,691	19.1
2030	10,868,614	215,539,586	19.83
State			
2010	37,335,085	836,463,980.46	22.4
2025	42,326,397	929,443,512.65	21.96
2030	43,939,250	957,178,153.19	21.78

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cont

As the IS/MND fails to evaluate the Project's consistency with the CARB 2017 *Scoping Plan* performance-based daily VMT per capita projections, the IS/MND's claim that the proposed Project would not conflict with the CARB 2017 *Scoping Plan* is unsupported.

Furthermore, as of November 16, 2022, CARB has released an updated scoping plan for achieving carbon neutrality. However, the IS/MND fails to discuss the updated CARB 2022 Scoping plan whatsoever. An EIR should be prepared for the proposed Project to provide additional information and analysis to conclude less-than-significant GHG impacts.

## Mitigation

### Feasible Mitigation Measures Available to Reduce Emissions

Our analysis demonstrates that the Project would result in potentially significant GHG impacts that should be mitigated further. As such, in an effort to reduce the Project's emissions, we identified several mitigation measures that are applicable to the proposed Project. Therefore, to reduce the Project's emissions, we recommend consideration of SCAG's 2020 RTP/SCS PEIR's Greenhouse Gas Project Level Mitigation Measures ("PMM-GHG-1"), as described below:<sup>39</sup>

SCAG RTP/SCS 2020-2045
<p><b>Greenhouse Gas Project Level Mitigation Measures – PMM-GHG-1</b></p> <p>In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the <i>State CEQA Guidelines</i>, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects related to violating air quality standards. Such measures may include the following or other comparable measures identified by the Lead Agency:</p> <p>b) Reduce emissions resulting from projects through implementation of project features, project design, or other measures, such as those described in Appendix F of the State CEQA Guidelines.</p>

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<sup>39</sup> "4.0 Mitigation Measures." Connect SoCal Program Environmental Impact Report Addendum #1, September 2020, available at: [https://scag.ca.gov/sites/main/files/file-attachments/fpeir\\_connectsocial\\_addendum\\_4\\_mitigationmeasures.pdf?1606004420](https://scag.ca.gov/sites/main/files/file-attachments/fpeir_connectsocial_addendum_4_mitigationmeasures.pdf?1606004420), p. 4.0-2 – 4.0-10; 4.0-19 – 4.0-23; See also: "Certified Final Connect SoCal Program Environmental Impact Report." Southern California Association of Governments (SCAG), May 2020, available at: <https://scag.ca.gov/peir>.



c) Include off-site measures to mitigate a project's emissions.	1.33 cont.
<p>d) Measures that consider incorporation of Best Available Control Technology (BACT) during design, construction and operation of projects to minimize GHG emissions, including but not limited to:</p> <ul style="list-style-type: none"> <li>i. Use energy and fuel-efficient vehicles and equipment;</li> <li>ii. Deployment of zero- and/or near zero emission technologies;</li> <li>iii. Use lighting systems that are energy efficient, such as LED technology;</li> <li>iv. Use the minimum feasible amount of GHG-emitting construction materials;</li> <li>v. Use cement blended with the maximum feasible amount of flash or other materials that reduce GHG emissions from cement production;</li> <li>vi. Incorporate design measures to reduce GHG emissions from solid waste management through encouraging solid waste recycling and reuse;</li> <li>vii. Incorporate design measures to reduce energy consumption and increase use of renewable energy;</li> <li>viii. Incorporate design measures to reduce water consumption;</li> <li>ix. Use lighter-colored pavement where feasible;</li> <li>x. Recycle construction debris to maximum extent feasible;</li> <li>xi. Plant shade trees in or near construction projects where feasible; and</li> <li>xii. Solicit bids that include concepts listed above.</li> </ul>	
<p>e) Measures that encourage transit use, carpooling, bike-share and car-share programs, active transportation, and parking strategies, including, but not limited to the following:</p> <ul style="list-style-type: none"> <li>i. Promote transit-active transportation coordinated strategies;</li> <li>ii. Increase bicycle carrying capacity on transit and rail vehicles;</li> <li>iii. Improve or increase access to transit;</li> <li>iv. Increase access to common goods and services, such as groceries, schools, and day care;</li> <li>v. Incorporate affordable housing into the project;</li> <li>vi. Incorporate the neighborhood electric vehicle network;</li> <li>vii. Orient the project toward transit, bicycle and pedestrian facilities;</li> <li>viii. Improve pedestrian or bicycle networks, or transit service;</li> <li>ix. Provide traffic calming measures;</li> <li>x. Provide bicycle parking;</li> <li>xi. Limit or eliminate park supply;</li> <li>xii. Unbundle parking costs;</li> <li>xiii. Provide parking cash-out programs;</li> <li>xiv. Implement or provide access to commute reduction program;</li> </ul>	
f) Incorporate bicycle and pedestrian facilities into project designs, maintaining these facilities, and providing amenities incentivizing their use; and planning for and building local bicycle projects that connect with the regional network;	
g) Improving transit access to rail and bus routes by incentives for construction and transit facilities within developments, and/or providing dedicated shuttle service to transit stations; and	
<p>h) Adopting employer trip reduction measures to reduce employee trips such as vanpool and carpool programs, providing end-of-trip facilities, and telecommuting programs including but not limited to measures that:</p> <ul style="list-style-type: none"> <li>i. Provide car-sharing, bike sharing, and ride-sharing programs;</li> <li>ii. Provide transit passes;</li> <li>iii. Shift single occupancy vehicle trips to carpooling or vanpooling, for example providing ride-matching services;</li> </ul>	



<ul style="list-style-type: none"> <li>iv. Provide incentives or subsidies that increase that use of modes other than single-occupancy vehicle;</li> <li>v. Provide on-site amenities at places of work, such as priority parking for carpools and vanpools, secure bike parking, and showers and locker rooms;</li> <li>vi. Provide employee transportation coordinators at employment sites;</li> <li>vii. Provide a guaranteed ride home service to users of non-auto modes.</li> </ul>
i) Designate a percentage of parking spaces for ride-sharing vehicles or high-occupancy vehicles, and provide adequate passenger loading and unloading for those vehicles;
<p>j) Land use siting and design measures that reduce GHG emissions, including:</p> <ul style="list-style-type: none"> <li>i. Developing on infill and brownfields sites;</li> <li>ii. Building compact and mixed-use developments near transit;</li> <li>iii. Retaining on-site mature trees and vegetation, and planting new canopy trees;</li> <li>iv. Measures that increase vehicle efficiency, encourage use of zero and low emissions vehicles, or reduce the carbon content of fuels, including constructing or encouraging construction of electric vehicle charging stations or neighborhood electric vehicle networks, or charging for electric bicycles; and</li> <li>v. Measures to reduce GHG emissions from solid waste management through encouraging solid waste recycling and reuse.</li> </ul>
k) Consult the SCAG Environmental Justice Toolbox for potential measures to address impacts to low-income and/or minority communities. The measures provided above are also intended to be applied in low income and minority communities as applicable and feasible.
l) Require at least five percent of all vehicle parking spaces include electric vehicle charging stations, or at a minimum, require the appropriate infrastructure to facilitate sufficient electric charging for passenger vehicles and trucks to plug-in.
<p>m) Encourage telecommuting and alternative work schedules, such as:</p> <ul style="list-style-type: none"> <li>i. Staggered starting times</li> <li>ii. Flexible schedules</li> <li>iii. Compressed work weeks</li> </ul>
<p>n) Implement commute trip reduction marketing, such as:</p> <ul style="list-style-type: none"> <li>i. New employee orientation of trip reduction and alternative mode options</li> <li>ii. Event promotions</li> <li>iii. Publications</li> </ul>
o) Implement preferential parking permit program
p) Implement school pool and bus programs
<p>q) Price workplace parking, such as:</p> <ul style="list-style-type: none"> <li>i. Explicitly charging for parking for its employees;</li> <li>ii. Implementing above market rate pricing;</li> <li>iii. Validating parking only for invited guests;</li> <li>iv. Not providing employee parking and transportation allowances; and</li> <li>v. Educating employees about available alternatives.</li> </ul>

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cont.

These measures offer a cost-effective, feasible way to incorporate lower-emitting design features into the proposed Project, which subsequently, reduce emissions released during Project construction and operation.



Furthermore, as it is policy of the State that eligible renewable energy resources and zero-carbon resources supply 100% of retail sales of electricity to California end-use customers by December 31, 2045, we emphasize the applicability of incorporating solar power system into the Project design. Until the feasibility of incorporating on-site renewable energy production is considered, the Project should not be approved.

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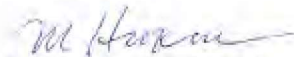
An EIR should be prepared to include all feasible mitigation measures, as well as include updated GHG analyses to ensure that the necessary mitigation measures are implemented to reduce emissions to below thresholds. The EIR should also demonstrate a commitment to the implementation of these measures prior to Project approval, to ensure that the Project's significant emissions are reduced to the maximum extent possible.

### Disclaimer

SWAPE has received limited discovery regarding this project. Additional information may become available in the future; thus, we retain the right to revise or amend this report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

1.34

Sincerely,



Matt Hagemann, P.G., C.Hg.



Paul E. Rosenfeld, Ph.D.

Attachment A: Matt Hagemann CV

Attachment B: Paul Rosenfeld CV



**Response to Comment 1.1:** This comment introduces the comment letter, and states that the commenter is writing on behalf of the Golden State Environmental Justice Alliance. Additionally, the comment requests the City notify the firm of any and all notices related to the proposed project. The firm and GSEJA will be notified regarding any CEQA actions and public hearings related to the project. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Comment 1.2:** This comment provides a summary of the project Description for the proposed project. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Comment 1.3:** This comment states that the MND does not include a floor plan, grading plan, or detailed site plan for the proposed project. Additionally, the comment states that the figures of the plans in the MND remove pertinent information. The comment also states that there is no method to verify that grading work of soils would balance onsite.

Pursuant to State CEQA Guidelines Section 15124, the project description “should not supply extensive detail beyond that needed for the evaluation and review of the environmental impact.” The proposed project is thoroughly described within the MND on pages 14 to 16. As such, the level of detail needed for the evaluation of the project by the public and decisionmakers, and for the review of the project’s environmental impacts is adequate within the project Description, and extensively detailed figures are not needed. As demonstrated by *Citizens for a Sustainable Treasure Island v City & County of San Francisco (2014) 227 CA4th 1036, 1053*, a CEQA document’s description of the proposed project should identify the project’s main features and other information needed for an analysis of the project’s environmental impacts. As long as the requirements set forth in State CEQA Guidelines Section 15124 are met, the project Description may allow for the flexibility needed to respond to changing conditions that could impact the project’s final design. As such, detailed plans such as grading plans, floor plans, or elevations are not required to be included in the MND’s project Description and a general description of the project and conceptual plans are allowed. In addition, detailed plans such as grading plans, floor plans, and elevations are available upon request at the City of Menifee Planning Department and public records subject to the California Public Records Act. Contact information for the project’s planner were provided in the MND should the commenter want to view additional plans not provided in the MND.

As discussed on page 16 of the MND, earthwork would be balanced based on the project site plans and grading plans that have been reviewed by the City and are being considered for approval. As discussed above, no further information is required, and the comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Comment 1.4:** This comment states that the MND does not include analysis relevant to environmental justice issues in reviewing potential impacts, including cumulative impacts from the proposed project to the surrounding community. The comment states that according to CalEnviroScreen 4.0, the census tract including the project site ranks significantly worse in several environmental factors compared to the rest of the state overall. The comment states that the census tract is affected by multiple sources of pollution and is a diverse community with a low educational attainment. Additionally, the commenter identifies the project site as in an SB 535 Disadvantaged Community, and a specific analysis of each environmental impact on the community, including cumulative analysis and irreversible environmental impacts should be analyzed.

CEQA is an environmental protection statute that is concerned with physical changes to the environment (State CEQA Guidelines Section 15358(b)). The environment includes land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance (CEQA Guidelines Section 15360). The project’s potential economic and social effects, including those related to environmental justice, are not



considered effects on the environment (State CEQA Guidelines Sections 15064(e) and 15131(a)). Thus, consistent with CEQA, the MND includes an analysis of the project's potentially significant physical impacts on the environment and does not include substantial discussion of the project's environmental justice effects.

However, the MND provides a detailed evaluation of the potential project-level and cumulative air quality related impacts of the proposed project upon the surrounding community (localized impacts). Regarding the existing pollution burden, the existing air quality in the project area is described in Appendix A to the MND on page 41. Table 2-4 in Appendix A provides data from the Perris Station and Lake Elsinore Station that details in 2020, there were 77 days that exceeded the state ozone standard and 74 days that exceeded the federal standard. In addition, 6 days exceeded the PM10 state standard and 0 days exceeded the federal standard for PM2.5. However, ambient air quality standards (NAAQS and CAAQS) were exceeded on one or more days for ozone, PM10, and PM2.5 at most monitoring locations throughout the South Coast Air Basin (SCAB).

As detailed on pages 35 through 41 of the MND, emissions from construction and operation of the proposed project would not expose sensitive receptors to substantial pollutant concentrations and emissions would not exceed the SCAQMD's localized significance thresholds for construction or operation. In addition, as detailed on page 40 of the MND, a Mobile Health Risk Assessment was prepared to evaluate the project's health risk impacts to residents and workers as a result of exposure to diesel particulate matter (DPM) from heavy-duty diesel trucks traveling to and from the project site, maneuvering onsite, and entering and leaving the site. The Mobile Source Health Risk Assessment determined that the maximum incremental cancer risk to nearby residences attributable to TAC source emissions is 0.63 in one million, which is less than the SCAQMD's significance threshold of 10 in one million. The maximum non-cancer risks to nearby residences were estimated to be <0.001, which would not exceed the applicable significance threshold of 1.0. As such, operation of the project at buildout would not cause a significant human health or cancer risk and impacts would be less than significant. Because the project would not exceed thresholds for either DPM or localized significance thresholds, the project would not adversely impact neighboring disadvantaged communities. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Comment 1.5:** This comment states that CalEEMod is not listed as an approved energy compliance modeling software. The comment states that since the MND did not accurately or adequately model impacts in compliance with Title 24, a finding of significance must be made and a project EIR with modeling in one of the three approved software types must be circulated for public review in order to adequately analyze the project's potentially significant environmental impacts.

The commenter incorrectly assumes the purpose of Title 24 and California Energy Commission approved software programs. The approved programs serve the purpose of being used under the performance approach (energy budget) method of compliance for the 2019 Energy Standards. The programs mentioned are not utilized for CEQA analysis. CalEEMod, the California Emissions Estimator Model, is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. The model was developed for the California Air Pollution Officers Association (CAPCOA) in collaboration with the California Air Districts. Additionally, the project would be compliant with measures set forth in Title 24. Compliance with Title 24 would be verified through the plan check process. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Comment 1.6:** The comment states that the MND does not discuss or analyze the project's compliance with the General Plan's Land Use Buildout Scenario, which projected a 0.40 FAR within EDC-NG and 25,020,987 square feet of non-retail development within all EDC areas. Additionally, the comment



states that the MND does not include the floor area ratio (FAR) of the project and additional evidence that the growth generated by the project was anticipated by applicable planning documents.

The SCAG RTP/SCS projections are based upon buildout of the existing General Plan land uses. The FAR for the project is stated on page 29 of the MND. The project FAR would be 0.42. The proposed project is consistent with the site's zoning designation of EDC-NG, which allows for a FAR of up to 1.0, therefore, the project would be consistent with the FAR for the site's zoning designation, and further, the SCAG RTP/SCS projections. Additionally, as stated in Exhibit LU-4 of the General Plan, the 0.4 FAR is representative of an "Average Density," which encompasses all of the EDC-NG areas and is not representative specifically of the project site. As stated in the General Plan Exhibit LU-4, "Historically, citywide build-out levels do not achieve the maximum allowable density/intensity on every parcel and are, on average, lower than allowed by the General Plan. Accordingly, the build-out estimates in this General Plan do not assume build-out at the maximum density or intensity and instead are adjusted downward to account for variations in build-out intensity." The average FAR applied for the General Plan Land Use Buildout scenario included the project site to calculate average buildout for the designated EDC-NG area, which was adjusted based on historically accurate development patterns to provide a more accurate analysis within the General Plan and General Plan EIR. Therefore, the project would be consistent with the City General Plan and SCAG RTP/SCS. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Comment 1.7:** This comment summarizes information provided in the MND related to unemployment rates within the City of Menifee and surrounding jurisdictions. The commenter states that employees will be required to drive long distances from their residence to the project site, which will increase project related VMT, and therefore, project related VMT and emissions should be analyzed in an EIR to reflect higher trip rates used during construction and operation. Additionally, the commenter states there is no evidence that the local workforce is qualified or interested in industrial work. Finally, because the unemployment rates of the city and surrounding cities are below five percent, the area is considered to be full employment, and therefore, claims that impacts will be less than significant are unsubstantiated.

Page 156 of the Draft MND describes that the project would generate approximately 210 employees, which would likely come from the areas near the Cities of Menifee, Perris, and Murrieta. To accommodate for the range of distances traveled by commuters "within commuting distance," the CalEEMod model and the Riverside County Model (RivCOM) include trip lengths that are recommended to be used by SCAG, the County, and are therefore appropriate to use in the MND for the proposed Project. Should additional labor force be needed to serve the project, the Draft MND further states that there is sufficient vacant housing available within the region to accommodate additional employees. The City of Menifee has a vacancy rate of 6.3 percent. The City of Menifee has a total of 38,734 housing units; 36,308 of which are occupied (2,426 unoccupied housing units), which would be more than sufficient to accommodate anticipated employees generated by the project. Therefore, the commute distances used in the Draft MND are appropriate and additional analysis regarding VMT, emissions, and the necessity for additional employee housing is not warranted. The commenter provides no substantial evidence of a significant environmental impact. An EIR is not required to be prepared.

**Response to Comment 1.8:** The comment states that the MND incorrectly calculated the project's number of operational employees pursuant to SCAG's Employment Density Study. By utilizing ratios within the study, the commenter estimates that the project would generate 440 operational employees. Further, the comment states that an EIR must be prepared to provide an accurate estimate of employees generated by the project. Additionally, the comment states that the EIR must provide demographic and geographic information on the location of qualified workers to fulfill employment needs of the project.



The SCAG study that the commenter references was conducted in 2001, prior to the proliferation of high cube warehouses. Additionally, the SCAG study is a reflection of regional information, as opposed to local. As included in the VMT Trip Generation and VMT Screening Analysis (Figure 4), prepared by EPD Solutions, Inc. (Appendix M), the anticipated number of employees generated by the project is 336. Anticipated employees provided by the VMT Screening Analysis are based on the Western Riverside Council of Government (WRCOG) VMT Tool, which directly incorporates data from the SCAG Regional Transportation Plan Sustainable Communities Strategy (RTP/SCS). This employee generation takes into consideration the project-specific TAZ zone and more recent available data regarding employment generation than provided by the commenter, and therefore, is the more accurate data to use within the MND. Additionally, the square footage used to calculate employees as part of the VMT Trip Generation and VMT Screening Analysis is slightly higher than the proposed project, and therefore, provides a conservative estimate of number of employees generated. Therefore, the Draft MND has been revised to reflect the appropriate number of employees anticipated to be generated by the project as incorporated into the modeling for the project. The following changes have been incorporated into Chapter 3, Errata.

**a) Induce substantial unplanned population growth in an area, either directly or indirectly?**

**Less Than Significant Impact No-Impact:** The proposed Project would redevelop the 13.89-acre Project site with 251,133 SF of warehouse and manufacturing uses. **As included in the VMT Trip Generation and VMT Screening Analysis (Figure 4), prepared by EPD Solutions, Inc. (Appendix M), the anticipated number of employees generated by the project is 336. Employee generation is based on the Western Riverside Council of Government (WRCOG), which incorporates data from the SCAG Regional Transportation Plan Sustainable Communities Strategy (RTP/SCS).** ~~According to SCAG, the generation rate for employees required for operation of an industrial project is 1 employee for every 1,195 SF of industrial space. Based on the SCAG employment generation rates, the Project is estimated to generate the need for approximately 210 employees. The employees that would fill these roles are anticipated to come from the region, as the unemployment rate of the City of Menifee in July 2022 was 3.9 percent, the City of Perris was 4.8 percent, and the City of Murrieta was at 2.8 percent (State Employment Development Department 2022). Due to these levels of unemployment, it is anticipated that new employees at the Project site would already reside within commuting distance and would not generate needs for any housing.~~

In addition, should the Project require employees to relocate to the area for work, there is sufficient vacant housing available within the region. The City of Menifee has a vacancy rate of 6.3 percent. The City of Menifee has a total of 38,734 housing units; 36,308 of which are occupied (State Department of Finance 2022). Therefore, impacts related to unplanned population growth from the Project would be less than significant.

Further, the 336 employees anticipated to be generated by the project would be accommodated by local workforce and/or available vacant housing within the area. Therefore, the project would be anticipated to result in a less than significant impact. The comment does not contain any information requiring further changes to the MND or requiring preparation of an EIR. No further response is warranted.

**Response to Comment 1.9:** This comment states that an EIR must be prepared to include the cumulative employment generated by all projects approved within the city since 2016. The comment provides SCAG demographic growth data and states that the MND does not provide any analysis of whether the project and other projects would cumulatively exceed SCAG's employment growth forecast.

As included in the VMT Trip Generation and VMT Screening Analysis, prepared by EPD Solutions, Inc. (Appendix M), the anticipated number of employees generated by the project is 336. Anticipated



employees provided by the VMT Screening Analysis are based on the WRCOG VMT Tool, which directly incorporates data from the SCAG RTP/SCS. Pages 140 through 145 describe that the project would develop the site in consistency with the General Plan land use designation. The City's General Plan EIR Section 10, Growth-Inducing Impacts of the Proposed project and Section 5.13, Population and Housing, includes development of the project site pursuant to the existing land use designations. The project would be consistent with the site's General Plan land use designation, which was used to inform the population and housing and cumulative analysis within the General Plan EIR, as well as the growth projections within the SCAG RTP/SCS. Thus, the project would generate the need for approximately 336 employees, which is accounted for within growth projections of the General Plan and SCAG's RTP/SCS. Thus, impacts the cumulative impacts of the project are accounted for and would be less than significant. An EIR is not required to be prepared.

**Response to Comment 1.10:** This comment states that the MND has not demonstrated that the available housing in surrounding areas is affordable to the project's workforce. As discussed in Response to Comment 1.8, the project would not be anticipated to generate the need for additional housing as it would employ people already living in the city and surrounding local jurisdictions. Additionally, according to the City's 6<sup>th</sup> Cycle Housing Element, the City plans to facilitate the development of 6,609 new housing units by 2029, which includes housing for all income categories, in order to accommodate anticipated growth in the SCAG area. Information regarding warehouse employee salaries is not required pursuant to CEQA. As such, an analysis of whether available housing is affordable to project employees is not required in the MND pursuant to State CEQA Guidelines Section 15358.

**Response to Comment 1.11:** This comment states that the MND does not provide analysis to support the conclusion that the project would not necessitate the construction of affordable housing to accommodate project employees. The comment provides various wages for warehouse workers and states the MND does not demonstrate that the project's employees will earn enough money to afford housing. The commenter erroneously compares area median income (AMI) to individual wages.

As described on page 156 of the MND, employees required for the project are anticipated to come from the region, and would reside within commuting distance to the site. Therefore, the project would not generate any need for additional housing. Furthermore, should the project require employees to relocate to the area for work, there is sufficient vacant housing available within the region. Furthermore, CEQA is an environmental protection statute that is concerned with the physical changes to the environment (State CEQA Guidelines Section 15358(b)). The environment includes land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance (State CEQA Guidelines Section 15360). The project merits, including any economic and social effects of the project, are not treated as effects on the environment (State CEQA Guidelines Sections 15064(e) and 15131(a)) (*San Franciscans for Reasonable Growth v City & County of San Francisco* (1989) 209 Cal.App.3d 1502). Therefore, consistent with CEQA, the MND includes an analysis of the project's potentially significant physical impacts on the environment and does not include a discussion of potential employee salaries. Furthermore, State CEQA Guidelines Section 15204(a) states that when responding to comments, lead agencies need only respond to significant environmental issues and do not need to provide all information requested by reviewers. Thus, information related to warehouse employee salaries is not provided nor is such material warranted under CEQA.

**Response to Comment 1.12:** This comment states that the MND has underreported the project's VMT impacts due to the use of WRCOG VMT calculator instead of the RIVCOM model per the City's Guidelines. However, this comment erroneously applies the City Guideline text "If the proposed project land use differs from the assumed land use in a project TAZ it is not appropriate to assume that a project will result in similar VMT or trip length characteristics, and a full model run would be recommended" by stating that the assumed land use in a project TAZ is based on the existing use of the project site (vacant). However, as included in the VMT Trip Generation and VMT Screening Analysis, prepared by EPD Solutions, Inc. (Appendix M), the WRCOG



VMT Tool assumes a land use designation consistent with the City's land use designation of the site, not the existing condition. Therefore, the project is consistent with the land use designation of the project site, and further, the VMT analyzed in the MND is accurate. Thus, VMT impacts of the project are accounted for and would be less than significant. An EIR is not required to be prepared.

**Response to Comment 1.13:** The commenter states that the scoping agreement form has not been included in the MND document and must be included for meaningful disclosure pursuant to CEQA guidelines. The scoping agreement is included under Appendix O, Traffic Impact Analysis, as Attachment A. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Comment 1.14:** This comment states that the VMT analysis excludes truck/trailer/freight trips from the VMT analysis and that an EIR should be prepared that contains a VMT analysis for trucks.

Based on local and State guidance as well as the State CEQA Guidelines Section 15064.3, VMT is an evaluation of passenger cars, not truck trips. The VMT analysis conducted therefore, only analyzed VMT/Employee for home-based-work trips as per the County Guidelines. This is consistent with State CEQA Guidelines Section 15064.3(a) which states "For the purpose of this section, "vehicle miles traveled" refers to the amount and distance of automobile travel attributable to a project." Here, the term "automobile" refers to on-road passenger vehicles, specifically cars and light trucks. Hence the VMT analysis only includes and represents the impacts of automobile travel as a result of the proposed project and is not required to include truck trips as a part of the VMT analysis. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Comment 1.15:** This comment states that the MND has not analyzed truck turning radius at the northern project intersections as a potential project impacts on increased hazards due to a geometric design feature or incompatible uses. The comment further states that analysis has been deferred regarding depiction of emergency vehicle access and truck turning.

The MND analyzes geometric design features on pages 162 through 167. Truck turning is illustrated in Traffic Impact Analysis, Appendix O, Attachment A. As shown in the figure, the proposed intersection would be adequate for heavy truck maneuvering. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Comment 1.16:** The comment states that the Conceptual Site Plan shows insufficient space at the Barnett Road driveways to accommodate trucks simultaneously entering and exiting the project site at the same time. While trucks cannot enter and exit at the same time, trucks would wait for one another to enter or exit the driveways to prevent collision. As provided in the Traffic Impact Analysis (Appendix O), traffic volume on Barnett Road is low, and therefore, truck turning operations would not result in any subsequent capacity or queuing issues that could cause increased hazards due to a geometric design feature. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Comment 1.17:** This comment states that the cumulative analysis of employees generated by the project need to be incorporated in the Mandatory Findings of Significance section of the MND. As discussed under Response to Comment 1.9, the project would be consistent with previously analyzed employment generation for the project site as included under the City's General Plan, the General Plan EIR, and the RTP/SCS. Emergency vehicle access would utilize proposed driveways to the Project site as specified on page 167 of the MND and the project would result in no impact. The comment does not contain any information requiring changes to the MND. No further response is warranted.



**Response to Comment 1.18:** The comment states that based on the comments provided, the commentor believes the MND is flawed and an EIR should be prepared and recirculated for public review. The comment reiterates that GSEJA requests to be added to the notification list for the proposed project. As substantiated by the responses above and below, none of the conditions arise which would require preparation of an EIR pursuant to State CEQA Guidelines Sections 15064 and 15065. No significant environmental impact would result from the project after implementation of existing regulations and mitigation measure proposed to be implemented. Thus, preparation of an EIR is not required. As requested, GSEJA will be added to the notification list for the proposed project.

**Response to Comment 1.19:** The comment is from a letter by Soil/Water/Air Protection Enterprise (SWAPE) dated March 1, 2023. This comment introduces the comment letter and provides a brief description of the proposed project. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Comment 1.20:** This comment states that the MND did not adequately analyze the project's impacts related to air quality, health risk, and greenhouse gas emissions. The comment requests that an Environmental Impact Report (EIR) be prepared to fully consider potential air quality, health risk, and greenhouse gas emissions as a result of the proposed project. This comment does not provide credible evidence of significant impacts that require the preparation of an EIR or that would require changes to the Public Review MND. No further response is warranted.

**Response to Comment 1.21:** This comment states that land use development projects under CEQA typically evaluate air quality impacts using the California Emissions Estimator Model (CalEEMod). The comment continues with a summary description of CalEEMod and notes that the model provides recommended default values based on project information, however, the user can change the defaults to be more specific if more information is known and if substantial evidence supports the change. The comment notes that once all values are inputted into the model, "output files" are generated that summarize the projects calculated construction and operational emissions, including disclosure of all project-specific input values.

This comment states that several CalEEMod model inputs are not consistent with the information disclosed in the MND, which results in the project's construction and operational emissions being underestimated. This comment states that an EIR should be prepared with an updated air quality analysis. All changes to the CalEEMod default values are discussed in Appendix 3.1 – 3.3 of the Air Quality Report (Urban Crossroads, 2022, Appendix A of the MND) and all changes to the CalEEMod default values are justified with substantial evidence. Furthermore, changes to CalEEMod default values were made to reflect project-specific conditions. The comment does not contain any information requiring further changes to the MND or requiring preparation of an EIR. No further response is warranted.

**Response to Comment 1.22:** This comment reiterates that several CalEEMod model inputs are not consistent with the information disclosed in the MND, which results in the project's construction and operational emissions being underestimated. All changes to the CalEEMod default values are discussed in Appendix 3.1 – 3.3 of the Air Quality Report (Urban Crossroads, 2022, Appendix A of the MND) and all changes to the CalEEMod default values are justified with substantial evidence. Furthermore, changes to CalEEMod default values were made to reflect project-specific conditions. The comment does not contain any information requiring further changes to the MND or requiring preparation of an EIR. No further response is warranted.

**Response to Comment 1.23:** The comment states that the CalEEMod output file for the project indicates an unsubstantiated construction schedule by indicating construction would take 11 months but does not provide evidence for the revised individual construction phase lengths. The comment asserts that the construction schedule included in the model underestimates emissions associated with each phase of construction **and that**



~~the MND does not justify the revised individual construction phase lengths.~~ Modified construction timing was provided by the project applicant and reflects the anticipated schedule to be implemented for project construction. ~~that the MND does not justify the revised individual construction phase lengths.~~ All changes to the CalEEMod default values are discussed in the Methodology section of the Air Quality Report (Appendix A of the MND) and all changes to the CalEEMod default values are justified with substantial evidence. Furthermore, changes to CalEEMod default values were made to reflect project-specific conditions. The comment does not contain any information requiring further changes to the MND or requiring preparation of an EIR. No further response is warranted.

**Response to Comment 1.24:** This comment states that the CalEEMod output file for the project do not properly justify model changes to the default architectural coating emission factors. The comment states that compliance with Rule 1113 should be included as a mitigation measure rather than a regulatory requirement. Additionally, the comment states that unless formal mitigation is included, there is now way to require 50 g/l VOC limit.

Like typical construction projects, the project would use flat and non-flat coatings. Per SCAQMD's Rule 1113, flat and non-flat coatings, which would be used for interior and exterior paint for the project, have a VOC limit of 50 grams per liter, which the project would be required to comply with. Therefore, the EIR's analysis is adequate as presented. The commenter's claim that a future tenant may not be able to comply with PPP AQ-2 is not a valid argument, since PPP AQ-2 will be a contractual requirement that will be included in the agreement between the construction contractor and project applicant. Additionally, the MMRP (Chapter 4 of the Final MND) includes all PPP measures to ensure implementation throughout project construction and operation, which specifically includes the requirement for 50 g/l VOC limits. The VOC limit of 50 g/l were accurately included in the CalEEMod modeling, as specified in the PPP AQ-2 measure. The comment does not contain any information requiring further changes to the MND or requiring preparation of an EIR. No further response is warranted.

**Response to Comment 1.25:** The comment letter states that the project trip generation included in the Appendix O, Traffic Impact Analysis, does not reflect the correct number trips for the project as the number of trips only include 71 Saturday and 39 Sunday vehicle trips, which does not total the anticipated 506 daily trips.

The commenter erroneously sums the total weekend trips and compares it to the total daily trips for the project as included in the trip generation, which reflects the highest total daily trips (either weekday or weekend), but does not consider uniformly applicable daily use of the project site. Based on the proposed use of the project site, the project is anticipated to generate fewer weekend trips, and therefore, the model inputs accurately reflect the anticipated trip generation as proposed by the project. The comment does not contain any information requiring further changes to the MND or requiring preparation of an EIR. No further response is warranted.

**Response to Comment 1.26:** This comment states that the HRA conducted for the project is incorrect because the HRA utilizes incorrect FAH values for third trimester and infant receptors.

~~The In response to the raised in this comment asserting~~ that the fraction of time at home (FAH) values relied upon by the HRA are inconsistent with those recommended by the South Coast AQMD **does not consider that the** —South Coast AQMD recommends OEHHHA guidance. The HRA followed South Coast AQMD-approved and OEHHHA guidance. The time at home factors used in the assessment are consistent with OEHHHA-recommended factors and, therefore, follow South Coast AQMD recommended guidance. The latest OEHHHA guidance can be found here:

<https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf>.



**Response to Comment 1.27:** This comment states that the project HRA fails to consider Age Sensitivity Factors (ASF) when calculating health risk.

The commenter erroneously states that Age Sensitivity Factors (ASF) were omitted from the analysis. As noted on Pages 19-20 of the HRA and illustrated on Tables 2-6 through 2-8, the “Age Specific Factor” is clearly identified. Furthermore, had the commenter reviewed the Risk Calculations contained in Appendix 2.4 of the health risk assessment, they would have found that the ASFs were appropriately included in the analysis.

**Response to Comment 1.28:** This comment states that the project would result in disproportionate health risk impacts on community members living, working, and going to school within the vicinity of the project site. Further, the comment provides that Riverside County includes high pollution rates for ozone, and that children are at the greatest risk of adverse health effects from exposure to these high levels of ozone.

As detailed on pages 35 through 41 of the MND, emissions from construction and operation of the proposed project would not expose sensitive receptors to substantial pollutant concentrations and emissions would not exceed the SCAQMD’s localized significance thresholds for construction or operation. In addition, as detailed on page 35 of the MND, a Mobile Health Risk Assessment was prepared to evaluate the project’s health risk impacts to residents and workers as a result of exposure to DPM from heavy-duty diesel trucks traveling to and from the project site, maneuvering onsite, and entering and leaving the site. The Mobile Source Health Risk Assessment determined that the operational 30 year exposure incremental cancer risk to nearby residences attributable to TAC source emissions is 0.10 in one million, which is less than the SCAQMD’s significance threshold of 10 in one million. The maximum non-cancer risks to nearby residences were estimated to be <0.01, which would not exceed the applicable significance threshold of 1.0. As such, operation of the project at buildout would not cause a significant human health or cancer risk and impacts would be less than significant. Because the project would not exceed thresholds for either DPM or localized significance thresholds, the project would not adversely impact neighboring disadvantaged communities. The comment does not contain any information requiring changes to the MND. No further response is warranted.

Additionally, CEQA is an environmental protection statute that is concerned with physical changes to the environment (CEQA Guidelines Section 15358(b)). The environment includes land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance (CEQA Guidelines Section 15360). The project’s potential economic and social effects, including those related to environmental justice, are not considered effects on the environment (CEQA Guidelines Sections 15064(e) and 15131(a)). Thus, consistent with CEQA, the MND includes an analysis of the project’s potentially significant physical impacts on the environment and does not include discussion of the project’s environmental justice effects. The comment does not contain any information requiring further changes to the MND or requiring preparation of an EIR. No further response is warranted.

**Response to Comment 1.29:** This comment states that the project provides incorrect GHG analysis due to reliance on an outdated threshold, unsubstantiated air model, and failure to demonstrate consistency with CARB’s 2017 Scoping Plan. The commenter provides no substantial evidence of a significant environmental impact. The comment does not contain any information requiring further changes to the MND or requiring preparation of an EIR. No further response is warranted.

**Response to Comment 1.30:** This comment states that the MND relies on an outdated GHG threshold (2020) and should be based on SCAQMD 2035 3.0 metric tons of carbon dioxide equivalents per service population per year targets.

The City understands that the 3,000 MTCO<sub>2</sub>e per year threshold for residential/commercial uses was proposed by SCAQMD a decade ago and was adopted as an interim policy; however, no permanent, superseding policy or threshold has since been adopted. The 3,000 MTCO<sub>2</sub>e per year threshold was



developed and recommended by SCAQMD, an expert agency, based on substantial evidence as provided in the Draft Guidance Document – Interim CEQA Greenhouse Gas Significance Threshold (2008) document and subsequent Working Group meetings (latest of which occurred in 2010). SCAQMD has not withdrawn its support of the interim threshold and all documentation supporting the interim threshold remains on the SCAQMD website on a page that provides guidance to CEQA practitioners for air quality analysis (and where all SCAQMD significance thresholds for regional and local criteria pollutants and toxic air contaminants also are listed). Further, as stated by SCAQMD, this threshold “uses the Executive Order S-3-05 goal [80 percent below 1990 levels by 2050] as the basis for deriving the screening level” and, thus, remains valid for use in 2023. Lastly, this threshold has been used for hundreds, if not thousands of GHG analyses performed for projects located within the SCAQMD jurisdiction.

Thus, for purposes of analysis in this analysis, if project-related GHG emissions do not exceed the 3,000 MTCO<sub>2</sub>e per year threshold, then project-related GHG emissions would clearly have a less-than-significant impact pursuant to Threshold GHG-1. On the other hand, if project-related GHG emissions exceed 3,000 MTCO<sub>2</sub>e per year, the project would be considered a substantial source of GHG emissions. The comment does not contain any information requiring further changes to the MND or requiring preparation of an EIR. No further response is warranted.

**Response to Comment 1.31:** This comment states that the project would result in a significant GHG impact when the SCAQMD 2035 3.0 metric tons threshold is applied. As provided above in Response to Comment 1.30, the project applied the appropriate GHG threshold. Therefore, the GHG analysis is accurate and the project would result in less than significant GHG impacts. The comment does not contain any information requiring further changes to the MND or requiring preparation of an EIR. No further response is warranted.

**Response to Comment 1.32:** This comment states that the MND does not provide evidence to substantiate claims that the project would be consistent with the CARB 2017 scoping plan. Consistency with the CARB Scoping Plan is provided beginning on page 49 of the project GHG Analysis (Appendix H). The commenter provides no substantial evidence of a significant environmental impact. The comment does not contain any information requiring further changes to the MND or requiring preparation of an EIR. No further response is warranted.

**Response to Comment 1.33:** this comment states that the project would result in potentially significant GHG impacts that should be mitigated based on the SCAG 2020-2045 RTP/SCS PEIR. However, as indicated in Response to Comments 1.30 through 1.32, the project would have a less than significant impact on GHG, and therefore, mitigation would not be required for the project. The comment does not contain any information requiring further changes to the MND or requiring preparation of an EIR. No further response is warranted.

**Response to Comment 1.34:** This comment states that the commenter has received limited discovery regarding the project, additional information may become available in the future; and the commentor retains the right to revise or amend this report when additional information becomes available. The comment also states that the comments reflect efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties. This comment is general in nature and does not provide evidence of significant impacts that require the preparation of an EIR or that would require changes to the MND. This comment and this response will be forwarded to all decision-making bodies to inform their decision on the project. No further response is warranted.



**Letter 2: City of Perris Development Services Department Planning Division, received March 6, 2023**



# **CITY OF PERRIS**

## **DEVELOPMENT SERVICES DEPARTMENT PLANNING DIVISION**

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March 6, 2023

Russell Brown  
City of Menifee  
Community Development Department  
29844 Haun Road  
Menifee, CA 92584

**SUBJECT: CITY OF PERRIS COMMENTS – NOTICE OF HEARING AND NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION FOR PLN21-0290 – ETHANAC AND BARNETT WAREHOUSES – LOCATED SOUTH OF ETHANAC ROAD AND WEST OF BARNETT ROAD (APNs: 331-060-036 AND 331-060-021)**

Dear Mr. Brown:

The City of Perris appreciates the opportunity to comment on the environmental impacts of the proposed Ethanac/Barnett Warehouses in Menifee totaling approximately 251,133 square feet on approximately 13.89 acres of land to be located south of Ethanac Road and west of Barnett Road ("Proposed Project"). The Proposed Project is to be located east of the existing Monument Ranch residential development in Perris and approximately 200 feet south of Green Valley Specific Plan ("GVSP") in Perris, where a multi family development has been approved for construction. The GVSP is a master-planned community totaling 1,269 acres of land envisioned to have 3,460 single-family detached homes, 750 multi-family units, 42.3 acres of business and professional office space, 72.7 acres of commercial retail, 108.7 acres of industrial, 24 acres for three school sites, and 51.1 acres of public parks.

2.1

Although there are some industrial zones in the GVSP, they are located adjacent to the Perris Valley Airport north of the San Jacinto River, which has land use density limitations. All the development in the GVSP south of the San Jacinto River to Ethanac Road is residential, with some commercial development towards the I-215 Freeway. In addition, there are six residential tracts comprised of 1,241 residential units which are anticipated to be constructed in phases this year. Therefore, no industrial development in the City of Perris is allowed to utilize Ethanac Road or Goetz Road as a truck route due to the sensitivity of residential land uses along these two roadways.

2.2

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The following comments are provided in light of concerns with the inadequacy of the Mitigated Negative Declaration (MND) document and the Project's proximity to the City of Perris residential neighborhood and the potential truck traffic on Ethanac Road:

2.2  
cont.

**1. California Environmental Quality Act (CEQA) Document.**

*Project Description*

The Notice of Intent (NOI) to Adopt a Mitigated Negative Declaration describes the project as the Ethanac and Barnett Speculative Warehouse(s). Likewise, the Vehicle Miles Traveled (VMT) Analysis provided in Appendix N and the Traffic Impact Analysis provided in Appendix O describe the project as the construction of two speculative buildings. However, the NOI, Initial Study/Mitigated Negative Declaration ("IS/MND") do not specifically state whether the buildings would be restricted to non-refrigerated uses or refrigerated uses could occupy the buildings. This is important because the two warehouse types create different operating characteristics (i.e., trip generation, vehicle trip fleet mix, and energy demand). For example, the average daily trip rate for a warehouse use identified in the project VMT Analysis is 1.71 trips per 1,000 square feet. The daily trip rate for a high-cube cold storage warehouse (ITE Land Use Code 157) is 2.21 per 1,000 square feet. A high-cube cold storage warehouse also generates many more 4+axle trucks (0.407 per 1,000 square feet or 19.2%) than a standard warehouse (17.2%). They also result in different air pollutant and greenhouse gas emissions, as well as operational noise levels. Thus, because the refrigerated/non-refrigerated uses have not been addressed, the traffic, air pollutant, greenhouse gas emissions, and operational noise level analyses upon which the IS/MND is based are flawed.

2.3

Unless the IS/MND and all Proposed Project approvals specifically state that the buildings would be restricted to non-refrigerated uses, it should be revised to evaluate the potential impacts associated with the possible operation of the buildings as refrigerated facilities. Alternatively, a Mitigation Measure is recommended prohibiting Transport Refrigeration Units (TRU) on site and further environmental analysis and recirculation of the IS/MND would be required should there be a need for TRUs on site. This is particularly important to the City of Perris because the sensitive receptors that would be located closest to the project will be within the Green Valley Specific Plan area to the immediate north of Ethanac Road. As discussed below, the building operations would determine whether any residents of the City of Perris could be exposed to substantial health risks from diesel particulate emissions. Appropriate Mitigation Measures will be recommended upon City's concurrence with the technical studies and analysis in the IS/MND.

2.4

*Air Quality*

As discussed above, the Proposed Project could generate more traffic than what is assumed in the IS/MND if refrigerated uses occupy portions of the proposed buildings. This would result in greater operational air pollutant emissions than what is identified in the IS/MND. In addition, the trucks traveling to and from the refrigerated uses would have truck refrigeration units (TRUs) which would be an additional source of air pollutants.

2.5

Each of the two buildings would be expected to require a diesel fire water pump. The emissions associated with the regular testing of these pumps should be included in the operational project emissions.

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The evaluation of diesel particulate health risk impacts is based on the emissions generated by mobile sources at the project site and experienced at nearby existing receptor locations. However, the analysis needs to be revised to evaluate the emissions from all diesel sources at the project site including the two (or more) diesel fire water pumps that are tested on a regular basis. In addition, the sensitive receptors that would be located closest to the project site and possibly exposed to the greatest health risk would be the new residents of the GVSP area to the immediate north of Ethanac Road. Although these receptors are not present right now, they will be present throughout the lifetime of this project. The analysis failed to evaluate the potential diesel particulate health risk impacts to these residents from all sources at the project site. Additionally, the Mitigated Negative Declaration failed to assess cumulative impacts of all currently proposed industrial projects westerly of this project. The project fails to provide proper mitigation for cumulative impacts of industrial developments proposed in this area.

2.5  
cont.

#### *Energy*

As discussed above, each of the two buildings would be expected to require a diesel fire water pump that is tested on a regular basis. The Proposed Project could also generate more traffic than what is assumed in the IS/MND if refrigerated uses occupy portions of the proposed buildings. In addition, the trucks traveling to and from the refrigerated uses would have TRUs. The energy evaluation should be revised to address these additional energy demands.

2.6

#### *Greenhouse Gas Emissions*

As discussed above, each of the two buildings would be expected to require a diesel fire water pump that is tested on a regular basis. The Proposed Project could also generate more traffic than what is assumed in the IS/MND if refrigerated uses occupy portions of the proposed buildings. In addition, the trucks traveling to and from the refrigerated uses would have TRUs. Each of these sources would result in greater operational GHG emissions than what is identified in the IS/MND. Additionally, the Mitigated Negative Declaration failed to assess cumulative impacts of all currently proposed industrial projects westerly of this project. The project fails to provide property mitigation for cumulative impacts of industrial developments proposed in this area.

2.7

#### *Health Risk Assessment*

The Health Risk Assessment (HRA) is incorrectly identified as Appendix B. It should be identified as Appendix C on the list of Appendices and the references made throughout the IS/MND. Furthermore, the HRA considered impacts to the residential subdivision to the south, located in the City of Menifee, but failed to analyze impacts to the recently approved residential development, located approximately 200 feet north of the site across Ethanac Road.

2.8

#### *Noise*

A Noise Study was not prepared to value nearby sensitive receptors such as residential homes. A noise study needs to be prepared in order to adequately mitigate noise impacts from the Project resulting from construction and operation due to the proximity of the project sites to the residential development in the immediate surrounding area, including areas within the City of Menifee and areas within the City of Perris along Ethanac Road.

2.9



### *Transportation*

As discussed above, the Proposed Project could also generate more traffic than what is assumed in the IS/MND if refrigerated uses occupy portions of the proposed buildings. Overall, the Proposed Project failed to adequately analyze traffic impacts and should be revised for compliance with the following:

- a) A Scoping Agreement should be submitted to the City of Perris for review and comments.
- b) Traffic Impact Analysis (TIA) should be submitted for public review. The TIA should analyze truck impacts at the intersection of Ethanac Road and Barnett Road and determine the width and length of the turn lane pocket(s) on Ethanac Road at Barnett Road. Barnett Road, as currently designed, does not provide safe and adequate access to westbound Ethanac Road. City of Perris prior comments had requested that the TIA analyze Barnett Road at Ethanac Road so that it be aligned with Case Road and improved to ultimate design for an efficient full turn signalized intersection. The intersection shall be concrete paved, per Caltrans standards, to withstand truck traffic. The TIA did not take these prior comments into consideration and as proposed, poses unsafe access onto Ethanac Road for trucks and passenger vehicles. The TIA should be revised to show the realignment of Barnett Road at Ethanac Road. A Scoping Agreement should be submitted to the City of Perris for review and comments prior to revising the TIA per the attached Exhibit A.
- c) To ensure consistency, the right-of-way width and alignment of Ethanac Road shall be coordinated with the roadway designation as classified per City of Perris General Plan. The correlation will determine the extent of roadway and intersection improvements at the intersection of Ethanac Road and Barnett Road to accommodate the traffic impacts related to the project's truck and passenger vehicle trips. The TIA should include the City of Perris roadway designations for Ethanac Road and Case Road as listed below.
  - a. Ethanac Road is classified as an Expressway (184'/134') with a 14 foot wide raised landscaped median.
  - b. Case Road is classified as a Secondary Arterial (94'/70') with a 14 foot wide raised landscaped median.

2.10

### *CEQA Noticing and Review*

The NOI to Adopt a Mitigated Negative Declaration includes the mailing list that was used for public review. Not included on this list is the State Clearinghouse. We checked the CEQA.net database and the IS/MND was not submitted to the State Clearinghouse.

Public Resources Code (PRC) § 21082.1 requires that an electronic form required by the Office of Planning and Research be submitted to the State Clearinghouse for review and comment for a draft EIR, proposed ND, or proposed MND for a project of this type.

2.11

The requirement to submit the draft EIR, proposed ND, or proposed MND for a project of this type to the State Clearinghouse for review and comment by state agencies is also specified in PRC § 21091(b).



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Trustee agencies are state agencies that, while they do not have discretionary approval over a project, have jurisdiction by law over natural resources affected by a project that are held in trust for the prop of California (PRC § 21070). There are four trustee agencies defined in the State CEQA Guidelines (Section 15386): the Department of Fish and Game (now the Department of Fish and Wildlife or CDFW), the Department of Parks and Recreation, the State Lands Commission, and the University of California.

An agency is a trustee agency by virtue of its jurisdiction over natural resources affected by a project; not based on the extent of a project's effect on those natural resources. For example, an EIR or MND may conclude that a project has no significant impact on fish and wildlife of the state, yet the CDFW would still be a trustee agency if the project affects fish or wildlife.

The Proposed Project has the potential to affect wildlife at the project site and mitigation measures are identified in the MND to address potential impacts to the burrowing owl and nesting birds. As such, the CDFW is a trustee agency for the Proposed Project and is to be afforded the opportunity to review the General Biological Assessment and IS/MND. Pursuant to State CEQA Guidelines Section 15073(d), this review would need to occur through the State Clearinghouse.

2.11  
cont.

Because the IS/MND was not submitted to the State Clearinghouse, the City has not complied with the public review requirements of PRC § 21082.1, PRC § 21091(b), and State CEQA Guidelines Section 15073(d), and a State trustee agency (the CDFW) has not been afforded the opportunity to review the IS/MND. The IS/MND must be submitted to the State Clearinghouse and the public review period must start over. The proposed initial study and mitigated negative declaration failed to comply with State CEQA requirements.

Please provide future notices prepared for the Proposed Project pursuant to the California Environmental Quality Act ("CEQA") under any provision of Title 7 of the California Government Code governing California Planning and Zoning Law which includes: notices of any public hearing held pursuant to CEQA, and notices of any scoping meeting held pursuant to Public Resources Code Section 21083.9.

2. **1,400-Foot Property Owners Notification.** Due to nearby sensitive uses, it is requested that property owner notification within at least 1,400 feet of the Proposed Project site is provided to ensure that all individuals who may be impacted by the proposed industrial development are provided an opportunity to comment. The project failed to notify sensitive residential receptors nearby.

2.12

3. **Land Use Inconsistency with Surrounding Areas/SB 330 Compliance** - The proposed industrial development is incompatible with the residential development in both the City of Perris and Menifee as properties on the north side of Ethanac Road are all designated for residential development. Further, the Proposed Project site is located in the City of Menifee Economic Development Corridor Northern Gateway, which is intended as an employment center where 5 percent of land is envisioned to be for residential uses. The initial study failed to analyse how this project is compliant with the land uses intended for this area.

2.13

4. **Good Neighbor Guidelines** - In September 2022, the City of Perris adopted Good Neighbor Guidelines for siting new and modified industrial facilities. Please clarify if, and how, the

2.14

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Proposed Project is in compliance with the City of Perris adopted Good Neighbor Guidelines and City of Menifee Industrial Good Neighbor Policies. For your reference, following is a link to the City of Perris Good Neighbor Guidelines <https://www.cityofperris.org/departments/development-services/planning/environmental-documents-for-public-review/-folder-327>

2.14  
cont.

5. **Drainage** - The plans, reports, and studies for the proposed storm drain pipe/connection from the project site on Evans Road to Romoland Channel should be conditioned to be reviewed and approved by City of Perris and Riverside County Flood Control and Water Conservation District (RCFCD); encroachment permits should be obtain from both entities.

2.15

The City of Perris thanks you for considering these comments. Please feel free to contact me at (951) 943-5003, ext. 355 or [pbrenes@cityofperris.org](mailto:pbrenes@cityofperris.org), if you have any questions or would like to discuss the above concern in further detail.

Sincerely,

  
Patricia Brenes  
Planning Manager

Enclosure - Exhibit A: Realignment of Barnett Road

cc: Clara Miramontes, City Manager  
Wendell Bugtai, Assistant City Manager  
Robert Khuu, City Attorney  
Kenneth Phung, Developments Services Director  
John Pourkazemi, City Engineer



**Response to Comment 2.1:** This comment introduces the comment letter, and states that the commenter is writing on behalf of the City of Perris. This comment provides a brief summary of the proposed project and its location. The comment also summarizes the land use breakdown of the Green Valley Specific Plan (GVSP). The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Comment 2.2:** This comment notes that within the Green Valley Specific Plan, there are some industrial zones adjacent to the Perris Valley Airport north of the San Jacinto River; however, all development south of the San Jacinto River to Ethanac Road consists of residential and commercial uses. The comment also notes that 1,241 additional residential units are anticipated to be constructed in 2023. The comment describes that due to the existing sensitive residential uses, no industrial development in the city is allowed to utilize Ethanac Road or Goetz Road as a truck route. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Comment 2.3:** This comment notes that the Notice of Intent (NOI) to Adopt a Mitigated Negative Declaration described the project as speculative warehouses. Additionally, the comment notes that the Vehicle Miles Traveled Analysis also described the project as speculative warehouses. The comment goes on to discuss that the NOI and Initial Study/Mitigated Negative Declaration did not specify whether the warehouses would include refrigerated uses. The comment concludes that because the MND did not consider refrigerated and non-refrigerated uses, the traffic analysis, air emissions analysis, greenhouse gas analysis, and operational noise analysis are flawed.

The proposed project does not anticipate the use of cold storage, and the project would be conditioned as such. Modeling prepared for the project accurately assumes trip generation rates based on the lack of proposed cold storage, as specified in the notes of Table T-1, project Trip Generation of the MND. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Comment 2.4:** This comment states that the MND and all proposed project approvals must specify that the buildings would be restricted to non-refrigerated uses; otherwise, the document would need to be revised to evaluate the potential impacts associated with a potential future tenant utilizing refrigeration. The comment also provides an alternative which is to incorporate a Mitigation Measure that would prohibit Transport Refrigeration Units (TRU) on site unless further environmental analysis and recirculation of the MND occurred. The comment notes that the City of Perris is concerned with the use of refrigeration due to the sensitive receptors that would be located close to the project. The comment states that building operations would determine whether sensitive receptors would be exposed to substantial health risks from diesel particulate emissions. The comment concludes by noting that the City would recommend appropriate mitigation measures upon agreement with the technical studies and analysis in the MND.

As stated above in Response to Comment 2.3, the project would be conditioned for the preclusion of cold storage uses. These conditions would be extended to any future site tenants unless additional environmental analysis is provided to assess additional impacts that could result from the use of cold storage. Therefore, analysis of cold storage and mitigation for the preclusion of cold storage uses would not be warranted. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Comment 2.5:** This comment reiterates that if the project were to allow refrigerated uses to occupy the buildings, the project could generate more traffic and therefore more operational air emissions than what is assumed in the MND. The comment also states that the use of TRUs would be an additional source of air emissions. The comment notes that the proposed buildings are anticipated to require a diesel fire water pump, thus the emissions associated with the regular testing of these pumps should be included on the operational project emissions analysis. The comment goes on to state that the analysis in the MND needs



to be revised to evaluate the emissions from all diesel sources at the project site included the two diesel fire water pumps. The comment also states that the project analysis consider that during the lifetime of the project, the nearest sensitive receptors to the project site would be the new residents of the Green Valley Specific Plan area immediately north of Ethanac Road. The comment states that the MND did not fully evaluate the potential diesel particulate health risk to these future residences from all sources at the project site. Additionally, the comment states that the MND did not fully consider cumulative impacts and mitigation associated with other proposed industrial projects in the area.

As stated above in Response to Comment 2.3, the project would be conditioned for the preclusion of cold storage uses. These conditions would be extended to any future site tenants unless additional environmental analysis is provided to assess additional impacts that could result from the use of cold storage. Therefore, analysis of cold storage and mitigation for the preclusion of cold storage uses would not be warranted. Additionally, the proposed project does not include fire pumps or emergency generators. Therefore, the analysis provided is adequate and accurately reflects the proposed project.

Further, upon review of the City of Perris GVSP, the GVSP provides for the future residential development north of Ethanac Road; however, the City of Menifee has not been notified and is not aware of any project-specific development approved 200 feet north of the proposed project. These findings are based on an extensive search on the City of Perris website, the State Clearinghouse, and communication with the City of Menifee, which did not yield evidence of any recently approved residential projects in the immediate vicinity of the project site. Further, based on review of the project site, the distance from the proposed project to the nearest potential future residential lot line would be a minimum of 700 feet based on the siting of the project, proposed open space within the GVSP, and Ethanac Road right-of-way. The HRA analyzes the nearest receptor location at 445 feet from the project site, and therefore, which is more conservative than the 700-foot distance that would be anticipated for future potential development north of the project site. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Comment 2.6:** This comment states that the energy analysis should be updated to consider energy usage associated with the two diesel fire water pumps, potential increase in traffic if refrigerated uses occupy the project, and the TRUs associated with operation of a potential refrigerated use.

As stated above in Response to Comment 2.3, the project would be conditioned for the preclusion of cold storage uses. These conditions would be extended to any future site tenants unless additional environmental analysis is provided to assess additional impacts that could result from the use of cold storage. Therefore, analysis of cold storage and mitigation for the preclusion of cold storage uses would not be warranted. Additionally, the proposed project does not include fire pumps or emergency generators. Therefore, the analysis provided is adequate and accurately reflects the proposed project. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Comment 2.7:** This comment reiterates that the proposed buildings would each require a diesel fire water pump and that a potential future refrigerated use could generate more traffic (including TRUs) than what is analyzed in the MND. The comment states that each of those sources would result in greater GHG than what is identified in the MND. The comment also states that the MND did not fully analyze cumulative impacts and mitigation related to other proposed industrial projects.

As stated above in Response to Comment 2.3, the project would be conditioned for the preclusion of cold storage uses. These conditions would be extended to any future site tenants unless additional environmental analysis is provided to assess additional impacts that could result from the use of cold storage. Therefore, analysis of cold storage and mitigation for the preclusion of cold storage uses would not be warranted. Additionally, the proposed project does not include fire pumps or emergency generators. Therefore, the



analysis provided is adequate and accurately reflects the proposed project. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Comment 2.8:** This comment notes that the Health Risk Assessment (HRA) is identified as Appendix B when it should be listed as Appendix C on the list of Appendices as well as throughout the MND. The comment also notes that the HRA analyzed impacts to the residential uses to the south but did not analyze impacts to the recently approved residential developed located approximately 200 feet north of the site across Ethanac Road.

As stated above in Response to Comment 2.3, the project would be conditioned for the preclusion of cold storage uses. These conditions would be extended to any future site tenants unless additional environmental analysis is provided to assess additional impacts that could result from the use of cold storage. Therefore, analysis of cold storage and mitigation for the preclusion of cold storage uses would not be warranted. Additionally, the proposed project does not include fire pumps or emergency generators. Therefore, the analysis provided is adequate and accurately reflects the proposed project.

Additionally, the HRA was appropriately listed in the appendix list and referenced throughout the MND as Appendix B, which is correct. The appendices were mislabeled when uploaded to the City website and SCH; however, all information was provided and accurately included in the MND.

Further, as discussed in Response to Comment 2.5 above, the City of Menifee has not been notified and is not aware of any project-specific development currently approved directly north of the proposed project. Further, based on review of the project site, the distance from the proposed project to the nearest potential future residential lot line would be a minimum of 700 feet based on the siting of the project, proposed open space within the GVSP, and Ethanac Road right-of-way. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Comment 2.9:** This comment states that a noise study was not prepared to evaluate noise impacts on nearby sensitive receptors. The comment states that a noise study should be prepared in order to fully mitigate noise impacts from construction and operation of the project to surrounding sensitive uses.

The project Draft MND analyzes potential noise impacts resulting from the project on pages 147 through 155. The analysis provided incorporates discussion from the Noise Study prepared for the project, which was included as Appendix M of the MND. The Noise Study includes potential impacts on sensitive noise receptors surrounding the project site. The Noise Study, and subsequent MND analysis, found that impacts would be less than significant. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Comment 2.10:** This comment reiterates that the project would generate more traffic than what is analyzed in the MND if refrigerated uses were to occupy the proposed buildings.

Response: As stated above in Response to Comment 2.3, the project would be conditioned for the preclusion of cold storage uses. These conditions would be extended to any future site tenants unless additional environmental analysis is provided to assess additional impacts that could result from the use of cold storage. Therefore, analysis of cold storage and mitigation for the preclusion of cold storage uses would not be warranted.

The comment continues with a list of items that were not fully analyzed and thus should be revised. These include:

- a) Submittal of a Scoping Agreement to the City of Perris for review and comments



Response: The project completed the proper scoping process with the City of Menifee, which has approval authority over the project as the Lead Agency. Approval of the scoping agreement by the City of Perris is not required.

- b) Submittal of the Traffic Impact Analysis (TIA) for public review. The comment notes that the TIA should include analysis of truck impacts at the intersection of Ethanac Road and Barnett Road, including determination of the width and length of the turn pockets on Ethanac and Barnett Road. The comment states that the current design of Barnett Road does not provide safe access to westbound Ethanac Road. The comment also states that the City of Perris had previously provided comments requesting that the TIA analyze Barnett Road at Ethanac Road so that it could be aligned with the design of Case Road. The comment notes that the intersection should be concrete paved in order to withstand truck traffic, per Caltrans standards. The comment states that the TIA did not consider the City's previous comments and therefore the design of Ethanac Road would be unsafe for trucks and passenger vehicles. The comment requests that the TIA be revised to show realignments of Barnett Road at Ethanac Road. The comment also requests that a Scoping Agreement be submitted to the City of Perris for review and comment prior to revision of the TIA.

Response: The TIA is based on PCE adjusted traffic counts and evaluates the PCE of the proposed project. Therefore, the TIA does include trucks in the LOS analysis. Furthermore, Section 6 of the Traffic Impact Analysis includes recommendations for geometric improvements to accommodate the safe access and circulation of trucks at the Ethanac Road and Barnett Road intersection.

The improvements proposed by the City of Perris at the intersection of Ethanac Road and Barnett Road represent a potential future City of Perris project. However, there is not a nexus to require the proposed development to construct or bear the full cost of implementation of the improvements. Furthermore, the timeline for implementation of the improvement is speculative and would occur after implementation of the proposed project. Therefore, it is not necessary to include realignment of the intersection of Ethanac Road and Barnett Road, as this project is not approved by either City or funded at this time. The project includes mitigation and condition to pay fair share costs for future improvements at the Ethanac Road and Barnett Road intersection proportional to the project-specific impacts.

- c) The comment states that the right-of-way width and alignment of Ethanac Road should be coordinated with the roadway designations from the City of Perris General Plan. The comment states that this coordination would determine the extent of roadway and intersection improvements needed at the intersection of Ethanac Road and Barnett Road. The comment states that the TIA should include the City of Perris roadway designations as follows:
  - a. Ethanac Road is classified as an Expressway (184'/134') with a 14 foot wide raised landscaped median
  - b. Case Road is classified as a Secondary Arterial (94'/70') with a 14 foot wide raised landscaped median

Response: The comment states that the City of Perris roadway classifications for Ethanac Road and Case Road should be considered in the realignment of the intersection and stated in the TIA. Please see the response to comment b regarding the intersection. Statement of the City's roadway classifications would not change the conclusions of the analysis presented in the TIA.

Therefore, the MND properly analyzed traffic impacts that could result from the project. Proper notification of the project was conducted pursuant to CEQA and the City of Menifee process as the Lead Agency. The comment does not contain any information requiring changes to the MND. No further response is warranted.



**Response to Comment 2.11:** This comment states that the NOI to Adopt the MND used a mailing list that did not include the State Clearinghouse. The comment states that according to the CEQAnet database, the MND was not submitted to the State Clearinghouse. The comment states that PRC Section 21091(b) also required an MND be submitted to the State Clearinghouse. The comment continues by explaining that trustee agencies are state agencies that have jurisdiction by law over natural resources affected by a project that are held in trust for the prop of California (PRC Section 21070). The comment notes that the potential MND disclosed impacts related to wildlife and includes mitigation related to the protection of burrowing owl and nesting birds, thus the CDFW is a trustee agency for the proposed project and should be given the opportunity to review the Biological Resources Assessment prepared for the MND. The comment notes that pursuant to State CEQA Guidelines Section 15073(d), this review should occur through the State Clearinghouse.

The comment continues by stating that because the MND was not submitted to the State Clearinghouse, the City of Menifee has not complied with the public review requirements pf PRC Sections 21082.1 and 21091(b) as well as State CEQA Guidelines Section 15073(d). The comment requests that the MND be submitted to the State Clearinghouse and that the public review period begin again so that the MND is in compliance with State CEQA Guidelines. The comment concludes by requesting that any future notices prepared pursuant to CEQA be provided to the City of Perris.

The project was uploaded to the State Clearinghouse for public circulation beginning February 4<sup>th</sup> and concluding March 6<sup>th</sup>. The posting can be accessed at: <https://ceqanet.opr.ca.gov/2023020108>. While CDFW has jurisdiction over biological resources within the state, there are no biological resources within the project site, as described on page 42 through 48. Based on substantial evidence, as disclosed in the General Biological Assessment (GBA) (Appendix C of the MND), the project site does not contain sensitive biological resources and the site is within the jurisdiction of the Multiple Species Conservation Habitat Plan (MSHCP). Mitigation measures were included pursuant to the MSHCP to ensure that impacts would not occur prior to construction. Therefore, the project was properly noticed and the public review period would not need to be conducted again. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Comment 2.12:** This comment requests that all property owners within 1,400 feet of the proposed project be notified of the project and be given the opportunity to comment. The comment states that the proposed project did not notify nearby sensitive receptors. The proposed notification radius for mailings is recommended, but not required or substantiated by the commenter. The project was adequately notified based on the City's public notification process, which included a radius of 800 feet (an increase from the standard City 500-foot radius per the City of Menifee Municipal Code Section 9.30.080, Public Hearing and Notice), and pursuant to the requirements of CEQA. The comment does not contain any information requiring changes to the MND or necessitate additional public circulation. No further response is warranted.

**Response to Comment 2.13:** This comment states that the proposed project is incompatible with the residential developments in both the City of Perris and the City of Menifee. Additionally, the comment states that the project site is located within the City of Menifee Economic Development Corridor Northern Gateway, which is intended as an employment center where five percent of the land is planned to be for residential uses. The comment states that the MND did not adequately analyze how the Project is compatible with surrounding land uses.

The project MND analyzes project consistency with applicable land use designations, plans, and policies on page 140 through 145. The project is consistent with the underlying land use and zoning designation of EDC and EDC-NG, respectively, as approved within the City of Menifee's General Plan and zoning map. Additionally, the project would be consistent with applicable local plans and policies. The project is not within



the City of Perris, nor does the project require approvals from the City of Menifee. Further, the project analyzes impacts on surrounding land uses throughout the MND within each topic section, such as Section 3 for air quality, Section 13 for noise, and so forth. Therefore, the MND adequately analyzes compatibility with surrounding land uses. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Comment 2.14:** This comment states that the City of Perris adopted Good Neighbor Guidelines in September 2022 and requests that the proposed project provide clarification as to how it is in compliance with these guidelines. The comment also provides a link to the City of Perris Good Neighbor Guidelines.

The project is within the City of Menifee, and therefore, would not be required to comply with the City of Perris Good Neighbor Guidelines. Further, the guidelines include recommendations rather than requirements. Therefore, the project is consistent with applicable plans and policies. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Comment 2.15:** This comment states that the plans, reports, and studies prepared for the proposed storm drain connection from Evans Road to Romoland Channel should be conditioned to be reviewed by the City of Perris and Riverside County Flood Control and Water Conservation District (RCFCD) and that encroachment permits be obtained from both entities.

Thank you for your comment, the project applicant will coordinate with the City of Perris and RCFCD and will request appropriate encroachment permits and approvals prior to construction, as conditioned for the project. The comment does not contain any information requiring changes to the MND. No further response is warranted.



**Appeal Letter 1: City of Perris, received March 20, 2023**



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March 20, 2023

City of Menifee  
City Clerk

**VIA HAND DELIVERY**

Honorable Mayor and City Council  
City of Menifee  
29844 Haun Road  
Menifee, CA 92584

Received

Re: **APPEAL OF PLOT PLAN NO. PLN21-0290 – ETHANAC AND BARNETT SPECULATIVE WAREHOUSES – LOCATED SOUTH OF ETHANAC ROAD AND WEST OF BARNETT ROAD (APNS: 331-060-036 AND 331-060-021)**

Dear Honorable Mayor and City Councilmembers:

On behalf of the City of Perris, this letter is submitted in objection to and constitutes an appeal of the City of Menifee's Planning Commission's March 8, 2023 decision approving Plot Plan No. PLN21-0290 and adoption of a Mitigated Negative Declaration ("MND").

**INTRODUCTORY STATEMENT**

The City of Perris ("Perris") submits this appeal following the Planning Commission's improper approval of the plot plan noted above due to non-compliance with the California Environmental Quality Act ("CEQA") regarding the environmental impacts of the proposed Ethanac/Barnett Warehouses in the City of Menifee ("Menifee") totaling approximately 251,133 square feet on approximately 13.89 acres of land located south of Ethanac Road and west of Barnett Road ("Project"). The Project is located east of the existing Monument Ranch residential development in Perris and approximately 200 feet south of Green Valley Specific Plan ("GVSP") in Perris, where a multi-family development has been approved for construction. The GVSP is a master-planned community totaling 1,269 acres of land envisioned to have 3,460 single-family detached homes, 750 multi-family units, 42.3 acres of business and professional office space, 72.7 acres of commercial retail, 108.7 acres of industrial, 24 acres for three school sites, and 51.1 acres of public parks.

Although there are some industrial zones in the GVSP, they are located adjacent to the Perris Valley Airport north of the San Jacinto River, which has land use density limitations. All the development in the GVSP south of the San Jacinto River to Ethanac Road is residential, with some commercial development towards the I-215 Freeway. In addition, there are six residential tracts comprised of 1,241 residential units, which are anticipated to be constructed in phases this

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year. Therefore, no industrial development in the City of Perris is allowed to utilize Ethanac Road or Goetz Road as a truck route due to the sensitivity of residential land uses along these two roadways.

A-3  
cont.

On October 14, 2021, Perris submitted to Menifee an initial comment letter identifying many of the same concerns at issue in this appeal. In addition, on March 6, 2023, Perris submitted to Menifee another comment letter also identifying many of the same concerns at issue in this appeal. Both the October 14, 2021, and March 6, 2023, letters are attached hereto as Exhibit A and incorporated herein by this reference. Menifee provided responses to Perris' March 6, 2023, letter, ("Menifee Response"); however, the Menifee Response failed to adequately address the issues raised in Perris' March 6, 2023, letter.

A-4

Therefore, City of Perris submits this appeal due to the inadequacy of the Initial Study/Mitigated Negative Declaration ("IS/MND") and the Project's un-addressed impacts on the City of Perris' residential neighborhoods, public safety concerns with the non-alignment of Barnett Avenue and Ethanac Road, and increased truck traffic on Ethanac Road. Specifically, the City of Perris appeals as set forth below.

A-5

#### **STATEMENT OF ISSUES APPEALED**

The following are the bases for the City of Perris' appeal of the Planning Commission's March 8, 2023, approval of Plot Plan No. PLN21-0290:

##### **I. Deficiencies in the IS/MND**

###### **A. Inadequate Project Description.**

The Notice of Intent ("NOI") to Adopt a Mitigated Negative Declaration describes the Project as the Ethanac and Barnett Speculative Warehouse(s). Likewise, the Vehicle Miles Traveled ("VMT") Analysis provided in Appendix N and the Traffic Impact Analysis provided in Appendix O describe the Project as the construction of two speculative buildings. However, the NOI for the IS/MND does not specifically state whether the buildings would be restricted to non-refrigerated uses or refrigerated uses could occupy the buildings. This is important because the two warehouse types create different operating characteristics (i.e., trip generation, vehicle trip fleet mix, and energy demand). For example, the average daily trip rate for a warehouse use identified in the Project VMT Analysis is 1.71 trips per 1,000 square feet. The daily trip rate for a high-cube cold storage warehouse (ITE Land Use Code 157) is 2.21 per 1,000 square feet. A high-cube cold storage warehouse also generates many more 4+axle trucks (0.407 per 1,000 square feet or 19.2%) than a standard warehouse (17.2%). They also result in different air pollutant and greenhouse gas emissions, as well as operational noise levels. Thus, because the non-refrigerated uses have not been completely addressed, the traffic, air pollutant, greenhouse gas emissions, and operational noise level analyses upon which the IS/MND is based are flawed.

A-6

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Unless the IS/MND and all Project approvals specifically state that the buildings would be restricted to non-refrigerated uses, they should be revised after evaluating the potential impacts associated with the operation of the buildings as refrigerated facilities. Alternatively, a condition of approval is recommended prohibiting the use of any portion of the building for refrigerated/cold storage use and prohibiting the presence and operation of Transport Refrigeration Units ("TRUs") on-site, and further environmental analysis and recirculation of the IS/MND would be required if there is a potential for refrigerated/cold storage within the buildings and/or the presence and operation of TRUs on site. This is particularly important to the City of Perris because the sensitive receptors that would be located closest to the Project will be within the Green Valley Specific Plan area to the immediate north of Ethanac Road. As discussed below, the building operations would determine whether any residents of the City of Perris could be exposed to substantial health risks from diesel particulate emissions. Appropriate Mitigation Measures will be recommended upon Perris' concurrence with the technical studies and analysis in the IS/MND.

A-7

Although Response to Comments 2.3 and 2.4 of the Menifee Response<sup>1</sup> states that the Project does not anticipate cold storage and that the Project would be conditioned as such, the conditions of approval do not contain a condition indicating that refrigerated/cold storage is not permitted for the Project. Specifically, Community Development Department Condition No. 4a only states that TRUs are not allowed as part of this approval and that additional environmental analysis shall be required by the tenant and/or property owner prior to the establishment of the use and operation of TRUs. However, the condition only affects the types of trucks and trailers that would be allowed to access the Project site. The condition does not prohibit the use of any portion of the buildings for refrigerated/cold storage use. Therefore, the modeling prepared for the Project does not accurately analyze trip generation rates or energy demand.

A-8

#### B. Insufficient Analysis of Air Quality Impacts.

As discussed above, the Project will likely generate more traffic than what is assumed in the IS/MND if refrigerated/cold storage uses occupy any portions of the proposed buildings. This would result in greater operational air pollutant emissions than what is identified in the IS/MND.

A-9

Each of the two buildings would be expected to require a diesel fire water pump emergency generator. The emissions associated with the regular testing of these pumps should be included in the operational Project emissions.

A-10

The evaluation of diesel particulate health risk impacts is based only on the emissions generated by mobile sources at the Project site and experienced at nearby existing receptor locations. However, the analysis needs to be revised to evaluate the emissions from all diesel sources at the Project site, including the two (or more) diesel fire water pump emergency

A-11

<sup>1</sup> For the purpose of this letter, references to "Response to Comment\_\_\_\_" are in reference to the responses provided in the Menifee Response.



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generators that are operated and tested on a regular basis. In addition, the sensitive receptors that would be located closest to the Project site and possibly exposed to the greatest health risk would be the new residents of the GVSP area to the immediate north of Ethanac Road. Although these receptors are not present right now, they will be constructed soon and present throughout the lifetime of this Project. The analysis in the IS/MND failed to evaluate the potential diesel particulate health risk impacts to these residents from all sources at the Project site. Additionally, the Mitigated Negative Declaration failed to assess cumulative impacts of all currently proposed industrial projects west of this Project. The Project fails to provide proper mitigation for cumulative impacts of industrial developments proposed in this area.

A-11  
cont.

Menifee's Response to Comment 2.5 fails to take into account that diesel fire water pump emergency generators are needed for the two proposed buildings in the Project. Although Menifee's Response to Comment 2.5 states that the Project does not include fire pumps or emergency generators, this statement is in direct conflict with the California Fire Code (California Code of Regulations, Title 24, Part 9). Where provided, fire pumps for fire protection systems shall be installed in accordance with Section 913 of the California Fire Code and NFPA 20, known as the Standard for the Installation of Stationary Pumps for Fire Protection.

A-12

NFPA 20 requires that pumps be provided to ensure that systems will work as intended to deliver adequate and reliable water supplies during a fire emergency. NFPA 20 states that, where electric fire water pumps are utilized, the electrical system needs to be reliable or a backup power source (i.e., generator) must be provided. Because Southern California Edison and San Diego Gas & Electric shut down power lines during Santa Ana wind conditions, all local fire departments require a secondary power supply for electric fire water pumps. These secondary power supplies are typically powered by diesel engines, which are accordingly required to be operated and tested on a regular basis. As such, it is expected that stationary diesel engines would be required for each of the proposed buildings in the Project.

A-13

The operation and testing of this equipment will generate emissions and increase energy demand. Comments by the City of Perris state that the air pollutant emissions, diesel particulate health risk impacts, energy demand, and greenhouse gas (GHG) emissions associated with the required fire water pumps have not been evaluated in the IS/MND.

A-14

Further, as indicated in Section I(G) of this letter, the realignment of Barnett Road is required to provide safe and adequate operations of the Case Road/Barnett Road intersection with Ethanac Road. The impacts, including construction-related air quality impacts, associated with the required off-site roadway improvements have not been evaluated in the IS/MND.

A-15

Based on this information, the IS/MND has not adequately evaluated the potential air quality (including diesel particulate health risks), energy, and GHG impacts associated with the Project. These impacts must be properly evaluated prior to the adoption of the IS/MND.

A-16

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**C. Inadequate Analysis of Energy Impacts**

As discussed above, each of the two buildings would be expected to require a diesel fire water pump emergency generator that is operated and tested on a regular basis. The Project could also generate more traffic than what is assumed in the IS/MND if refrigerated uses occupy any portions of the proposed buildings. The energy evaluation should be revised to address these additional energy demands.

A-17

Menifee's Response to Comment 2.6 states that cold storage uses are not permitted as part of the Project. As indicated in Section I(A) of this letter, the Project's conditions of approval do not contain any prohibition on the use of refrigerated/cold storage uses nor does it contain any such prohibition that would be extended to any future tenants. Based upon this, mitigation/analysis relating to cold storage is needed. Further, as indicated in Section I(D) of this letter, diesel fire water pump emergency generators are needed for the Project. And, as indicated in Section I(G) of this letter, the realignment of Barnett Road is required to provide safe and adequate operations of the Case Road/Barnett Road intersection with Ethanac Road. The impacts, including construction-related energy demand and use, associated with the required off-site roadway improvements have not been evaluated in the IS/MND. Therefore, the Project's energy analysis must be updated to account for these issues.

A-18

**D. Inadequate Analysis of Greenhouse Gas Emissions ("GHG") Impacts**

As discussed above, each of the two buildings would be expected to require a diesel fire water pump emergency generator that is operated and tested on a regular basis. The Project could also generate more traffic than what is assumed in the IS/MND if refrigerated uses occupy any portions of the proposed buildings. Each of these sources would result in greater operational GHG emissions than what is identified in the IS/MND. Additionally, the Mitigated Negative Declaration failed to assess cumulative impacts of all currently proposed industrial projects westerly of this Project. The Project fails to provide property mitigation for cumulative impacts of industrial developments proposed in this area.

A-19

Menifee's Response to Comment 2.7 is inadequate. As stated above, the Project's conditions of approval do not contain any prohibitions regarding refrigerated/cold storage uses; thus, the related GHG emissions impacts must be analyzed. Similarly, the GHG analysis must account for emissions due to the fire water pump emergency generators as those are required. Therefore, the analysis is inadequate and inaccurate.

A-20

Further, as indicated in Section I(G) of this letter, the realignment of Barnett Road is required to provide safe and adequate operations of the Case Road/Barnett Road intersection with Ethanac Road. The impacts, including construction-related GHG emissions impacts, associated with the required off-site roadway improvements have not been evaluated in the IS/MND.

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The evaluation of GHG emissions impacts in the IS/MND is based on the SCAQMD's 3,000 MTCO<sub>2</sub>e threshold of significance. The IS/MND identifies that the Project would generate 2,985.38 MTCO<sub>2</sub>e of GHG emissions per year. Each of the sources discussed above would result in greater operational GHG emissions than what is identified in the IS/MND. As such, these sources, which were not evaluated in the IS/MND, may be capable of generating at least 14.7 MTCO<sub>2</sub>e of GHG emissions per year. This would cause the Project to exceed the 3,000 MTCO<sub>2</sub>e threshold of significance.

A-23

Based on this information, the IS/MND has not demonstrated that the Project will, in fact, generate GHG emissions that do not exceed the SCAQMD threshold of significance. As such, there is a fair argument that the impact of the Project would be significant. An EIR should be prepared to evaluate this impact of the Project.

A-23

#### E. Inadequate Health Risk Assessment

The Health Risk Assessment (HRA) is incorrectly identified as Appendix B. It should be identified as Appendix C on the list of Appendices and the references made throughout the IS/MND. Furthermore, the HRA considered impacts to the existing residential subdivision to the south, located in the City of Menifee, but failed to analyze impacts to the recently approved residential development located within the City of Perris, located approximately 200 feet north of the site across Ethanac Road.

A-24

In the original comments by Perris on the IS/MND, Perris stated that the evaluation of diesel particulate health risk impacts is based only on the emissions generated by mobile sources at the Project site and experienced at nearby existing receptor locations. However, Perris also stated that the analysis needs to be revised to evaluate the emissions from all diesel sources at the Project site, including the two (or more) diesel fire water pump emergency generators that would be operated and tested on a regular basis.

A-25

As discussed above, Menifee's Response to Comment 2.5 states that the Project does not include diesel fire water pumps or emergency generators. However, pursuant to the above, Menifee's statement is in direct conflict with NPPA 20. The Health Risk Assessment must be revised to include the emissions associated with the operation and testing of the diesel engines for the fire water pump emergency generators.

A-26

Additionally, in its original comments, Perris stated that the sensitive receptors that would be located closest to the Project site, and possibly exposed to the greatest health risk, would be the new residents of the GVSP area to the immediate north of Ethanac Road. Although these receptors are not present right now, they will be constructed soon and present during the lifetime of the Project.

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Menifee's Response to Comment 2.8 is likewise problematic. Response to Comment 2.8 states that Menifee has not been notified and is not aware of any project-specific development currently approved directly north of the Project site. The response also states that the distance from the Project to the nearest potential future residential lot line would be a minimum of 700 feet based on the siting of the Project, proposed open space within the GVSP and Ethanac Road right-of-way. The information in Menifee's Response is incorrect.

A-28

First, Perris approved the GVSP on March 5, 1990. Since approval of the GVSP in 1990, the Perris Crossings retail center was built and is in full operation in the southeast corner (3150 Case Rd, Perris, CA 92571) of the GVSP area. Residentially zoned properties within the GVSP along Ethanac Road near Case Road have been designated for residential use since adoption of the GVSP and have been approved to be developed with multi-family development.

A-29

Second, while the multi-family development area located closest to the Project site is not under construction at the present time, this is an approved land use that will be occupied with sensitive receptors during the lifetime of the Project. The residential area would be less than 200 feet from the Project site and the nearest receptor could be as close as 550 feet from the nearest truck operations within the Project site. Rather than speculating as to the development that is approved within the GVSP as stated in Response to Comment 2.5, it is Menifee's responsibility, or the responsibility of the consultants working on behalf of Menifee, to contact Perris to obtain information regarding the location of sensitive receptors approved for this area of Perris, which was not pursued. For example, the GVSP is available for review on the City of Perris website at <https://www.cityofperris.org/home/showpublisheddocument/2629/637217272577300000> and should have been utilized to identify the approved sensitive receptors in the vicinity that would be affected by the Project. That did not occur for this Project, and the IS/MND completely ignores potential impacts to these approved sensitive receptors.

A-30

According to the Health Risk Assessment, the residential land use with the greatest potential exposure to Project operational-source DPM emissions is Location R8, which is located approximately 1,092 feet south of the Project site. This is much greater than the distance (less than 200 feet) from the nearest residential area within the GVSP to the Project site. Therefore, the assumption in Menifee's response that the City of Perris' comment does not contain any information requiring changes to the MND is not supported by any factual data. The Health Risk Assessment must be revised to evaluate the potential diesel particulate health risks to the approved sensitive receptors within the GVSP, and the results of the revised analysis must be presented to the City of Perris prior to adoption of the IS/MND.

A-31

#### F. Inadequate Analysis of Noise Impacts

A Noise Study was not prepared to evaluate nearby sensitive receptors such as residential homes. However, the analysis does not assess potential operational impacts to the approved residential uses within the GVSP. While the multi-family development area located closest to the

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Project site is not under construction at the present time, this is an approved land use that will be occupied with sensitive receptors during the lifetime of the Project. The closest residential area would be less than 200 feet from the Project site, and the nearest receptor could be as close as 550 feet from the nearest truck operations within the Project site. The noise study needs to be revised in order to adequately identify and mitigate noise impacts from the Project resulting from construction and operation due to the proximity of the Project sites to the approved residential development in the GVSP discussed above.

A-32  
cont.

#### G. Inadequate Analysis of Transportation Impacts

The intersection of Barnett Road and Ethanac Road will not function safely and satisfactorily due to the existing confound and staggered configuration of the intersections of Barnett Road and Case Road at Ethanac Road. There is limited distance for the trailer trucks to make the necessary lane change from the I-215 southbound off-ramp to Case Road and then to the left turn lane at Barnett Road. The left turn prockete provides limited stacking for trailer trucks to make a safe left turn movement. The slow-moving trailer trucks and the changing of the lanes will cause congestion, extended backup, and queuing, causing unsafe vehicular movements. The queuing shall be fully analyzed. Also, the length of the left turn lane from Case Road to Barnett Road is inadequate for a trailer truck.

A-33

As discussed above, the Project could also generate more traffic than what is assumed in the IS/MND if refrigerated/cold storage uses occupy any portions of the proposed buildings. Overall, the Project failed to adequately analyze traffic impacts and should be revised for compliance with the following:

1. A Scoping Agreement should be submitted to the City of Perris for review and comments.
2. Traffic Impact Analysis (TIA) should be submitted for public review. The TIA should analyze truck impacts at the intersection of Ethanac Road and Barnett Road and determine the width and length of the turn lane pocket(s) on Ethanac Road at Barnett Road. Barnett Road, as currently designed, does not provide safe and adequate access to westbound Ethanac Road. City of Perris prior comments had requested that the TIA analyze Barnett Road at Ethanac Road so that it be aligned with Case Road and improved to ultimate design for an efficient full-turn signalized intersection. The intersection shall be concrete paved, per Caltrans standards, to withstand truck traffic. The TIA did not take these prior comments into consideration and, as proposed, poses unsafe access onto Ethanac Road for trucks and passenger vehicles. The TIA should be revised to show the realignment of Barnett Road at Ethanac Road. A Scoping Agreement should be submitted to the City of Perris for review and comments prior to revising the TIA per the

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attached Exhibit B.

3. To ensure consistency, the right-of-way width and alignment of Ethanac Road shall be coordinated with the roadway designation as classified per City of Perris General Plan. The correlation will determine the extent of roadway and intersection improvements at the intersection of Ethanac Road and Barnett Road to accommodate the traffic impacts related to the Project's truck and passenger vehicle trips. The TIA should include the City of Perris roadway designations for Ethanac Road and Case Road as listed below.
  - (a) Ethanac Road is classified as a 184-foot Expressway with a 14-foot wide raised landscaped median.
  - (b) Case Road is classified as a 94-foot Secondary Arterial with a 14-foot wide raised landscaped median.

A-34  
cont.

Menifee's Response to Comment 2.10 incorrectly states that there is no nexus in the proposed realignment of Barnett Road with Case Road. As stated above, the Project has impacts on the safe access to westbound Ethanac Road, which requires the realignment of Barnett Road with Case Road, which is a public safety concern generated by the proposed Project. Further, although the Project contains mitigation and conditions to pay fair share costs for future improvements to the Ethanac Road and Barnett Road intersection, those measures do not address the public safety issue raised and do not contain mitigation and conditions that would alleviate the impacts of the Project on Perris, given that the intersection of Ethanac Road and Barnett Road is predominately within Perris and, therefore, the City of Perris would be a Responsible Agency for such related improvements pursuant to CEQA and any mitigation, conditions, or payments for any costs should be coordinated with Perris (including any payment of fair share costs).

A-35

The Project must be conditioned such that the Project applicant is 100% responsible for the cost of design and construction of aligning Barnett Road at Ethanac Road with Case Road to ultimate design for an efficient full-turn signalized intersection. The intersection shall be concrete paved, per Caltrans standards, to withstand truck traffic. Further, the Project applicant must be responsible for the construction of the ultimate design improvements on Ethanac Road from the intersection of the realigned Case Road/Barnett Road and Ethanac Road to the northbound on and off ramp in coordination with Riverside County Transportation Department (RCTC). RCTC in cooperation with Caltrans, has proceeded with a Project Study report (PSR)/Project Development Support (PDS) for the I-215/Ethanac Road Interchange Improvements, of which may impact the development of this development application. The developer/property owner shall contact Azan Junaid with RCTC for coordination and information regarding the PSR/PDS. All of the above-mentioned design and construction must be coordinated with the City of Perris and in compliance with City of Perris requirements.

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Further, these improvements will require further CEQA analysis. Pursuant to Section 15003(h) of the State CEQA Guidelines, "[t]he lead agency must consider the whole of an action, not simply its constituent parts, when determining whether it will have a significant environmental effect." (*Citizens Assoc. For Sensible Development of Bishop Area v. County of Inyo* (1985) 172 Cal.App.3d 151) The IS/MND does not identify all of the roadway improvements that would be required for the Project and does not evaluate the potential environmental impacts associated with the construction and implementation of these improvements. The IS/MND should be revised to identify all of the required roadway improvements and identify the City of Perris as a responsible agency for such roadway improvements under CEQA (as the majority of such roadway improvements will be within Perris' jurisdiction). The IS/MND must also be revised to evaluate the potential impacts associated with the construction and implementation of these improvements. The analysis of the Project actions within the City of Perris must be based on the standards, regulations, and policies of the City of Perris. This would include an evaluation of project consistency with all applicable policies from the City of Perris General Plan that have been adopted for the purpose of avoiding or mitigating an environmental effect.

A-37

Additionally, the Project cannot have driveway access to the site on Ethanac Road due to limited frontage on a designated expressway that permits high-speed traffic.

A-38

As such, the IS/MND improperly analyzed the traffic impacts of the Project and does not address the impacts of the Project.

A-39

## **II. Notice to Property Owners within 1,400 feet**

Due to nearby sensitive uses, it is requested that property owner notification within at least 1,400 feet of the Project site is provided to ensure that all individuals who may be impacted by the proposed industrial development are provided an opportunity to comment. The City of Menifee failed to notify sensitive residential receptors nearby.

A-40

## **III. The Project is Inconsistent with Surrounding Areas/SB 330 Compliance**

The Project is incompatible with the residential development in both the City of Perris and Menifee, as properties on the north side of Ethanac Road are all designated for residential development. Further, the Project site is located in the City of Menifee Economic Development Corridor Northern Gateway, which is intended as an employment center where 5 percent of land is envisioned to be for residential uses. The IS/MND failed to analyze how this Project is compliant with the land uses intended for this area, including within Perris.

A-41

Although Menifee's Response to Comment 2.13 states that the IS/MND analyzed Project consistency with applicable land use designation, plans, and policies, it does not address the requirement that 5% of the land use in the City of Menifee Economic Development Corridor Northern Gateway is designated as residential uses. As such, it does not address how the Project

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would be compatible with this 5% residential use.

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cont.

With respect to impacts on surrounding land uses, it did not analyze the impact upon sensitive receptors within Perris. Specifically, it does not take into consideration the impact of the Project upon the residentially zoned areas within the GVSP. As indicated above and in its Response to Comments 2.5 and 2.8, Menifee admits that it did not take into account the sensitive receptors located north of the Project site (in particular, those within the GVSP).

A-43

#### IV. Failure to Comply with City of Menifee Industrial Good Neighbor Policies

It needs to be clarified how, if at all, this Project complies with the City of Menifee Industrial Good Neighbor Policies. Menifee's Response to Comment 2.14 is inadequate in that it does not clarify whether the Project complies with the City of Menifee Industrial Good Neighbor Policies.

A-44

#### CONCLUSION

The City of Perris asks that the Menifee City Council reverse the decision and deny the Proposed Plan in light of the significant deficiencies in the Project and IS/MND described above. The City of Perris looks forward to working with the Menifee to facilitate the preparation and consideration of a Project and proper IS/MND that meets the requirements described above.

A-45

Respectfully,

ALESHIRE & WYNDER, LLP



Stephen R. Onstot  
Partner

Attachments: Exhibits A and B



**Response to Appeal 1:** This comment introduces the appeal letter, and states that the commenter is writing on behalf of the City of Perris. This comment presents an objection to the City of Menifee's (Menifee) Planning Commission for the decision to approve the Mitigated Negative Declaration (MND) for Plot No. PLN21-0290. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 2:** This comment notes the reasoning for the appeal is following the improper approval of the plot plan due to non-compliance with the California Environmental Quality Act. This comment provides a brief summary of the proposed project and its location. The comment also summarizes the land use breakdown of the Green Valley Specific Plan (GVSP). The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 3:** This comment notes that within the GVSP, there are some industrial zones adjacent to the Perris Valley Airport north of the San Jacinto River however, all development south of the San Jacinto River to Ethanac Road consists of residential and commercial uses. The comment also notes that 1,241 additional residential units are anticipated to be constructed in this year, 2023. The comment describes that due to the existing sensitive residential uses, no industrial development in the City of Menifee is allowed to utilize Ethanac Road or Goetz Road as a truck route. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 4:** This comment notes that the City of Perris has submitted two letters to the City of Menifee previously. An Initial comment letter was submitted on October 14, 2021, and a subsequent comment letter was sent on March 6, 2023, identifying similar concerns to the ones raised in this appeal. The comment states that the responses provided by Menifee to the March 6<sup>th</sup> comment letter failed to adequately address the issues raised in the letter. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 5:** This comment states that the City of Perris is submitting the appeal due to several un-addressed impacts in the Initial Study (IS) /MND including residential neighborhoods in the City of Perris, public safety concerns from non-alignment of Barnett Avenue and Ethanac Road, and increased truck traffic on Ethanac road. The comment does not contain any information or explanation requiring changes to the MND. No further response is warranted.

**Response to Appeal 6:** This comment notes that the Notice of Intent (NOI) to Adopt a Mitigated Negative Declaration described the project as speculative warehouses. Additionally, the comment notes that the Vehicle Miles Traveled Analysis also described the project as speculative warehouses. The comment goes on to discuss that the NOI and IS/MND did not specify whether the warehouses would include refrigerated uses. The comment concludes that because the MND did not consider refrigerated and non-refrigerated uses, the traffic analysis, air emissions analysis, greenhouse gas analysis, and operational noise analysis are flawed.

The proposed project does not anticipate the use of cold storage, and the project would be conditioned as such. Conditions have been modified to also preclude the provision of cold storage within the proposed buildings. Modeling prepared for the project accurately assumes trip generation rates based on the lack of proposed cold storage, as specified in the notes of Table T-1, project Trip Generation of the MND. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 7:** This comment states that the MND and all proposed project approvals must specify that the buildings would be restricted to non-refrigerated uses, otherwise the document would need to be revised to evaluate the potential impacts associated with a potential future tenant utilizing refrigeration. The comment also provides an alternative which is to incorporate a Mitigation Measure that would prohibit Transport Refrigeration Units (TRU) on site unless further environmental analysis and recirculation of the MND



occurred. The comment notes that the City of Perris is concerned with the use of refrigeration due to the sensitive receptors that would be located close to the project. The comment states that building operations would determine whether sensitive receptors would be exposed to substantial health risks from diesel particulate emissions. The comment concludes by noting that the City of Perris would recommend appropriate mitigation measures upon agreement with the technical studies and analysis in the MND.

As stated above in Response to Appeal 6, the project would be conditioned for the preclusion of cold storage uses. These conditions would be extended to any future site tenants unless additional environmental analysis is provided to assess additional impacts that could result from the use of cold storage. Therefore, analysis of cold storage and mitigation for the preclusion of cold storage uses would not be warranted. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 8:** This comment states that the City of Menifee response to comments 2.3 and 2.4 in the previous letter does not contain an adequate condition indicating that cold storage would not be permitted for the project. The comment identifies Community Development Condition 4a specifically, stating the condition only affects the types of trucks and trailers that would be allowed to access the project site rather than prohibit the use of any portion of the buildings for refrigerated/cold storage use. Thus, the comment concludes that modeling prepared for the project does not accurately analyze trip generation rates or energy demand.

Condition 4a states that TRU's are not allowed as part of the approval and that environmental analysis shall be required by the tenant/property owner prior to establishment and operation of TRU's. Conditions have been modified to also preclude the provision of cold storage within the proposed buildings. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 9:** This comment reiterates that if the project were to allow refrigerated uses to occupy the buildings, the project could generate more traffic and therefore more operational air emissions than what is assumed in the MND.

As stated above in Response to Appeal 6, the project would be conditioned for the preclusion of cold storage uses. These conditions would be extended to any future site tenants unless additional environmental analysis is provided to assess additional impacts that could result from the use of cold storage. Therefore, the project would not generate more traffic and therefore operational air emissions as there would be no cold storage uses allowed. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 10:** The comment notes that the proposed buildings are anticipated to require a diesel fire water pump, thus the emissions associated with the regular testing of these pumps should be included on the operational project emissions analysis.

The proposed project does not include fire pumps or emergency generators. Therefore, the analysis provided is adequate and accurately reflects the proposed project. However, out of an abundance of caution, an emissions analysis including the operational use and testing of two diesel fire water pumps for the two proposed buildings was conducted and included as Attachment A. As shown in Attachment A, two diesel fire pumps would generate 3.77 MTCO<sub>2</sub>E annually. When added to the emissions totals presented in the IS/MND, this negligible increase in emissions would not result in any change to the findings or conclusions related to air quality or greenhouse gas (GHG) emissions. Therefore, the project would result in less than significant air quality and GHG impacts. The comment does not contain any information requiring changes to the MND. No further response is warranted.



**Response to Appeal 11:** Continuing from the statement in appeal 10, it goes on to state that the analysis in the MND needs to be revised to evaluate the emissions from all diesel sources at the project site, including fire pumps and generator. The comment also states that the project analysis should consider that during the lifetime of the project, the nearest sensitive receptors to the project site would be the new residents of the GVSP area immediately north of Ethanac Road. The comment states that the MND did not fully evaluate the potential diesel particulate health risk to these future residences from all sources at the project site. Additionally, the comment states that the MND did not fully consider cumulative impacts and mitigation associated with other proposed industrial projects in the area.

Upon review of the City of Perris GVSP, the GVSP provides for the future residential development north of Ethanac Road; however, the City of Menifee has not been notified and is not aware of any project-specific development approved 200 feet north of the proposed project. However, out of an abundance of caution, HRA evaluation was conducted with consideration of potential diesel particulate health risk to potential future residential land uses per the GVSP at 374 feet from the nearest trucking operations to the southern right of way boundary on Ethanac Road. The potential health risks at the future GVSP residential uses would be 0.36 in one million for operations, 1.51 in one million for construction, and 1.68 in one million for combined construction and operational activity. As summarized, none of these risk values exceed the applicable SCAQMD threshold of 10 in one million. The HRA modeling sheets are provided in Appendix A. The project would result in less than significant health risk impacts on potential future residential development to the north and is compatible with the GVSP. It should be noted that the project site is currently zoned for business park and industrial uses within the City of Menifee and that the proposed project is an industrial use that is consistent with the site's zoning within the City of Menifee. The commenter is asserting that although the residentially zoned site within the GVSP is vacant, and although no residential projects have been approved or even submitted to the City of Perris for consideration, the MND should have used a future baseline and assumed the site as occupied with residential uses and further should assess the cumulative impacts of industrial projects on a currently vacant parcel. The MND and supplemental HRA analysis provided herein demonstrate that, using the appropriate SCAQMD methodology for HRAs, the proposed project would have less than significant impacts on residentially zoned areas in the GVSP and existing nearest sensitive receptors. Therefore, the impacts are less than significant, no additional changes to the MND are necessary, and preparation of an EIR is also not warranted. No further response is warranted.

**Response to Appeal 12:** This comment states that Menifee's response to comments, specifically comment 2.5, does not consider that diesel fire water pumps and emergency generators are needed for the proposed project's two buildings. The comment notes that this conflicts with California Fire Code and California Code of Regulations Title 24 Part 9, which state that fire pumps for fire protection systems shall be installed in accordance with section 913 of the California Fire Code and NFPA 20. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 13:** This comment reiterates that it is expected that stationary diesel engines would be required for each of the proposed buildings in the project and that they are required to be operated and tested on a regular basis based on the requirements of NFPA. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 14:** This comment states that operation and testing of diesel engines and fire water pumps would increase air pollutant emissions, diesel particulate health risk impacts, energy demand, and GHG emissions that have not been considered or evaluated in the IS/MND.

The proposed project does not include fire pumps or emergency generators. Therefore, the analysis provided is adequate and accurately reflects the proposed project. However, out of an abundance of caution, an emissions analysis including the operational use and testing of two diesel fire water pumps for the two



proposed buildings was conducted and included as Attachment A. As stated above in Response to Appeal 10 and 11, even with incorporation of a fire pump, the project would result in less than significant air quality, GHG, and health risk impacts. Additionally, the inclusion of fire pumps would result in less than significant energy impacts. Therefore, the analysis provided is adequate and accurately reflects the proposed project. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 15:** This comment states that construction related air quality impacts associated with required off-site roadway improvements have not been evaluated in the IS/MND since the realignment of Barnett Road is required to provide safe and adequate operations of the Case Road/Barnett Road intersection with Ethanac Road.

The improvements proposed by the City of Perris at the intersection of Ethanac Road and Barnett Road represent a potential future City of Perris project. However, there is not a nexus to require the proposed development to construct or bear the full cost of implementation of the improvements. Furthermore, the timeline for implementation of the improvement is speculative and would occur after implementation of the proposed project. Therefore, it is not necessary to include realignment of the intersection of Ethanac Road and Barnett Road, as that project is not approved by either city or funded at this time. The project includes mitigation and condition to pay fair share costs for future improvements at the Ethanac Road and Barnett Road intersection proportional to the project-specific impacts.

**Response to Appeal 16:** This comment reiterates the previous statements that the IS/MND has not adequately evaluated potential air quality (particulate health risks), energy, and GHG impacts associated with the realignment of Case Road and that these impacts must be evaluate prior to adoption of the document.

As stated above in Response to Appeal 15, realignment of Case Road is not proposed or required as part of the project. Therefore, the analysis provided in the IS/MND is adequate, accurately reflects the proposed project, and properly evaluates air quality, GHG, and energy impacts.

**Response to Appeal 17:** This comment reiterates that each of the proposed buildings as part of the project would be expected to require a diesel fire water pump and emergency generator that is tested and operated on a regular basis. Additionally, the comment states that the project could generate more traffic than is assumed in the IS/MND if refrigeration occupies portions of the buildings. The comment states that the IS/MND should revise the energy evaluation to address these additional energy demands.

As stated above in Response to Appeal 6, the project would be conditioned for the preclusion of cold storage uses. These conditions would be extended to any future site tenants unless additional environmental analysis is provided to assess additional impacts that could result from the use of cold storage. Therefore, analysis of cold storage and mitigation for the preclusion of cold storage uses would not be warranted. Additionally, the proposed project does not include fire pumps or emergency generators. However, even with the inclusion of two fire pumps, the project would result in less than significant impacts on energy as shown in Attachment A. Therefore, the energy analysis provided is adequate and accurately reflects the proposed project. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 18:** This comment states that further mitigation and analysis relating to cold storage is needed. The comment reiterates that the project's conditions of approval do not prohibit the use of refrigerated/cold storage uses nor does it contain any prohibition that would extend to any future tenants. Additionally, the comment reiterates that diesel for water pumps and backup generators is needed for the project and the realignment of Barnett Road is required to provide safe and adequate operations of the Case Road/Barnett Road intersection with Ethanac Road. Impacts relating to energy demand and use have



not been evaluated in the IS/MND based on the previous statements and the project's energy analysis must be updated to address these issues.

As stated above in Response to Comment Appeal 6, the project would be conditioned for the preclusion of cold storage uses. These conditions would be extended to any future site tenants unless additional environmental analysis is provided to assess additional impacts that could result from the use of cold storage.

Additionally, the proposed project does not include fire pumps or emergency generators. However, out of an abundance of caution, modeling was conducted to show the potential future use of two fire pumps. As shown in Attachment A, the project would result in less than significant impacts on energy with the inclusion of a fire pump. Therefore, the energy analysis provided is adequate and accurately reflects the proposed project.

The improvements proposed by the City of Perris at the intersection of Ethanac Road and Barnett Road represent a potential future City of Perris project. However, there is not a nexus to require the proposed development to construct or bear the full cost of implementation of the improvements. Furthermore, the timeline for implementation of the improvement is speculative and would occur after implementation of the proposed project. Therefore, it is not necessary to include realignment of the intersection of Ethanac Road and Barnett Road, as this project is not approved by either city or funded at this time. The project includes mitigation and conditions to pay fair share costs for future improvements at the Ethanac Road and Barnett Road intersection proportional to the project-specific impacts. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 19:** The comment reiterates the need to include and consider the regular operation and testing of diesel fire water pumps and backup generators for the two proposed buildings in the project. The comment also states that the project could generate more traffic than what was assumed in the IS/MND if refrigerated uses occupy any proportions of the buildings. These additional sources would result in greater operation GHG emissions than what was identified in the IS/MND. The comment states that the project fails to provide property mitigation for cumulative impacts of westerly industrial developments proposed in the area and thus must update the project's energy analysis to account for these issues.

The proposed project does not include fire pumps or emergency generators. Therefore, the analysis provided is adequate and accurately reflects the proposed project. However, out of an abundance of caution, an emissions analysis including the operational use and testing of two diesel fire water pumps for the two proposed buildings was conducted and included as Attachment A. As stated above in Response to Appeal 10, even with incorporation of a fire pump, the project would result in less than significant GHG impacts. Further, CEQA Guidelines Section 15130(f) describes that the effects of GHG emissions are by their very nature cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis. Additionally, CEQA Guidelines Section 15064(h)(3) states that 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 requirements to avoid or lessen the cumulative problem. Because the project would comply with the approved AQMD 2017 Scoping Plan Update, the project would not result in a significant cumulative impact. Therefore, the analysis provided is adequate and accurately reflects the proposed project. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 20:** This comment reiterates that the GHG analysis in the IS/MND is inadequate and inaccurate and that Response to Comment 2.7 from the City of Menifee does not contain prohibitions regarding refrigerated/cold storage uses. Similarly, the GHG analysis must account for emissions due to fire water pump emergency generators as those are required.



As stated above in Response to Appeal 6, the project would be conditioned for the preclusion of cold storage uses. These conditions would be extended to any future site tenants unless additional environmental analysis is provided to assess additional impacts that could result from the use of cold storage. Therefore, analysis of cold storage and mitigation for the preclusion of cold storage uses would not be warranted. Additionally, the proposed project does not include fire pumps or emergency generators. However, out of an abundance of caution, an emissions analysis including the operational use and testing of two diesel fire water pumps for the two proposed buildings was conducted and included as Attachment A. As stated above in Response to Appeal 10, even with incorporation of a fire pump, the project would result in less than significant GHG impacts. Therefore, the GHG analysis provided is adequate and accurately reflects the proposed project. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 21:** This comment reiterates that the realignment of Barnett Road is required to provide safe and adequate operations of the Case Road/Barnett Road intersection with Ethanac and Barnett. Thus, impacts relating to construction GHG emissions with the required off-site roadway improvements have not been evaluated in the IS/MND.

The improvements proposed by the City of Perris at the intersection of Ethanac Road and Barnett Road represent a potential future City of Perris project. However, there is not a nexus to require the proposed development to construct or bear the full cost of implementation of the improvements. Furthermore, the timeline for implementation of the improvement is speculative and would occur after implementation of the proposed project. Therefore, it is not necessary to include realignment of the intersection of Ethanac Road and Barnett Road, as this project is not approved by either city or funded at this time. The project includes mitigation and condition to pay fair share costs for future improvements at the Ethanac Road and Barnett Road intersection proportional to the project-specific impacts. Therefore, the GHG analysis provided is adequate and accurately reflects the proposed project. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 22:** This comment states that GHG emissions impacts evaluated in the IS/MND utilizing and based on the SCAQMD's thresholds of significance are inadequate as they do not evaluate the sources previously mentioned in Appeal 19, 20, and 21. The comment states that with these sources considered, the project would exceed the 3,000 MTCO<sub>2</sub>e threshold of significance.

As stated above, the GHG analysis provided is adequate and accurately reflects the proposed project. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 23:** This comment states that the IS/MND has not demonstrated that the project will generate GHG emissions that do not exceed the SCAQMD threshold of significance and an EIR should be prepared.

As stated above, the GHG analysis provided is adequate and accurately reflects the proposed project. The comment does not contain any information requiring changes to the MND. No further response is warranted and preparation of an EIR is not required.

**Response to Appeal 24:** This comment notes that the HRA is identified as MND Appendix B when it should be listed as Appendix C on the list of Appendices as well as throughout the MND. The comment also notes that the HRA analyzed impacts to the residential uses to the south but did not analyze impacts to the recently approved residential developed located approximately 200 feet north of the site across Ethanac Road.

Upon review of the City of Perris GVSP, the GVSP provides residentially zoned areas north of Ethanac Road; however, as discussed in Response to Appeal Comment 11, the MND and supplemental HRA analysis



provided herein demonstrate that, using the appropriate SCAQMD methodology for HRAs, the proposed project would have less than significant impacts on residentially zoned areas in the GVSP and existing nearest sensitive receptors. Therefore, the impacts are less than significant and no additional changes to the MND are necessary and preparation of an EIR is also not warranted. No further response is warranted.

**Response to Appeal 25:** This comment reiterates that the IS/MND analysis fails to consider the two (or more) diesel fire water pump and emergency generators that would be operated and tested on a regular basis. The comment states that the IS/MND HRA needs to be revised to evaluate the emissions from all diesel sources at the project site, including the fire water pumps and generators.

The proposed project does not include fire pumps or emergency generators. Therefore, the analysis provided is adequate and accurately reflects the proposed project. However, out of an abundance of caution, an emissions analysis including the operational use and testing of two diesel fire water pumps for the two proposed buildings was conducted and included as Attachment A. As stated above in Response to Appeal 11, even with incorporation of two fire pumps, the project would result in less than significant health risk impacts. Therefore, the analysis provided is adequate and accurately reflects the proposed project. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 26:** This statement reiterates that City of Menifee's response to comment 2.5 is in direct conflict with NFPA 20, thus the HRA must be revised to include the emissions associated with operation and testing of diesel engines for the fire water pump emergency generators.

Out of an abundance of caution, an emissions analysis including the operational use and testing of two diesel fire water pumps for the two proposed buildings was conducted and included as Attachment A herein. As stated above in Response to Appeal 11, even with incorporation of two fire pumps, the project would result in less than significant health risk impacts. Therefore, the analysis provided is adequate and accurately reflects the proposed project. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 27:** This comment reiterates that the sensitive receptors with the closest proximity to the site and possibly exposed to the greatest health risk would be the new residents of the GVSP area, north of Ethanac Road. These residents are not present yet but will be constructed soon.

As stated in Response to Appeal 24, the City of Menifee has not been notified and is not aware of any project-specific development approved 200 feet north of the proposed project. Furthermore, the driveway and parking lot that are nearest to the GVSP are for passenger vehicles only – trucks are prohibited on that driveway. However, out of an abundance of caution HRA evaluation was conducted with consideration of potential diesel particulate health risk to potential future residential land uses per the GVSP at 374 feet from the nearest trucking operations to the southern right of way boundary on Ethanac Road. The potential health risks at the future GVSP residential uses would be 0.36 in one million for operations, 1.51 in one million for construction, and 1.68 in one million for combined construction and operational activity. As summarized, none of these risk values exceed the applicable SCAQMD threshold of 10 in one million. The project would result in less than significant health risk impacts on potential future residential development to the north. As stated above, the health risk analysis provided is adequate and accurately reflects the proposed project. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 28:** This comment states that the information in the City of Menifee's response to comment 2.8 is problematic and incorrect. Response 2.8 states that the City of Menifee has not been notified or aware of any project-specific development currently approved directly north of the project site. Additionally, the response states that the distance from the project to the nearest future potential residential



lot line would be a minimum of 700 feet. Please see Response to Comment Appeal 27 which discusses the health risk assessment at the nearest residentially zoned area in the City of Perris. The comment does not contain any information requiring changes to the MND or resulting in the need for the preparation of an EIR. No further response is warranted.

**Response to Appeal 29:** This comment provides background on the GVSP area and its residentially zoned properties near the project Site. The comment notes that these residentially zoned properties have been designated for residential use since adoption of the GVSP and have been approved to be developed with multi-family developments. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 30:** This comment states that although the multi-family development area near the project site is not under construction at the present time, residentially designated land uses in the GVSP should be considered a sensitive receptor during the lifetime of the project. The commenter states that the residential area would be less than 200 feet from the project site and acknowledges that the closest residential receptor could be close to 550 feet from the nearest truck operations. The comment states that it was the responsibility of Menifee or consultants on their behalf to obtain information regarding the location of sensitive receptors approved in the GVSP area. This comment also states that the IS/MND and response to comment 2.5 ignores potential impacts to these approved sensitive receptors.

The project site is currently zoned for business park and industrial uses and the proposed project is an industrial use that is consistent with the site's zoning within the City of Menifee. The commenter is asserting that although the residentially zoned site within the GVSP is vacant, and although no projects have been approved or even submitted to the City of Perris for consideration, the MND should have used a future baseline and assumed the site as occupied with residential uses. In response to this comment and out of an abundance of caution, additional HRA analysis was conducted with consideration of potential diesel particulate health risk to potential future residential land uses per the GVSP as discussed in Response to Comment Appeal 27. The proposed project would result in less than significant health risk impacts on potential future residential development to the north. The comment does not contain any information requiring changes to the MND or resulting in the need for the preparation of an EIR. No further response is warranted.

**Response to Appeal 31:** This comment states that the HRA needs to be revised to evaluate the potential diesel particulate health risks to the approved sensitive receptors within the GVSP and be presented to the City of Perris before approval of the IS/MND. The comment also notes that the residential land use with the greatest potential exposure in the HRA is a much greater distance than that of the residential area in the GVSP. Additionally, the comment notes that the response from the City of Menifee that the information regarding the GVSP future residential residents does not require changes to the MND is not supported by facts.

As stated in Response to Appeal 27, additional HRA analysis was conducted with consideration of potential diesel particulate health risk to potential future residential land uses per the GVSP, which determined that the proposed project would result in less than significant health risk impacts on potential future residential development to the north. The modeling sheets are provided in Attachment A. The comment does not contain any information requiring changes to the MND or the circulation of an EIR. No further response is warranted.

**Response to Appeal 32:** This comment states that the noise study in the IS/MND needs to be revised in order to adequately identify and mitigate noise impacts from the project resulting from construction and operation due to proximity of the project site to approved residential development in the GVSP. The comment states that the Noise Study did not assess potential operational impacts to the approved residential uses within the



GVSP, although the closest residential area would be less than 200 feet from the project site, and the nearest sensitive receptor would be as close to 550 feet from the nearest truck operations.

Upon review of the City of Perris GVSP, the GVSP provides for the future residential development north of Ethanac Road; however, the City of Menifee has not been notified and is not aware of any project-specific development approved 200 feet north of the proposed project. These findings are based on an extensive search on the City of Perris website, the State Clearinghouse, and communication with the City of Menifee, which did not yield evidence of any recently approved residential projects in the immediate vicinity of the project site. However, out of an abundance of caution noise modeling was conducted with consideration of potential noise impacts to potential future residential land uses per the GVSP at 374 feet from the northern project site boundary. As shown in Attachment A, at 374 feet from the northern project site boundary, the future GVSP uses to the north of the project site are expected to experience a daytime exterior noise level of 37.7 dBA Leq and a nighttime exterior noise level of 37.6 dBA Leq. The project exterior noise levels would satisfy the City of Perris and City of Menifee exterior noise standards. In addition, the future GVSP residential uses to the north would not be directly exposed to the loading dock noise source activities from the project with the warehouse building structure acting as noise barrier separating the future GVSP residential from the loading dock noise source activities. The project would result in less than significant noise impacts on potential future residential development to the north. Therefore, the noise analysis provided is adequate and accurately reflects the proposed project. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 33:** This comment states that the intersection of Barnett Road and Ethanac Road will not function safely and satisfactory due the existing configuration of the intersections of Barnett Road and Case Road at Ethanac Road. Specifically, trailer trucks have limited distance to make necessary lane changes from I-25 off-ramp to Case Road and then to Barnett Road. Additionally, the left turn pocket provides limited stacking for trailer trucks to make safe left turn movements. This would cause congestion, extended backup, and queuing, causing unsafe vehicular movements.

The improvements proposed by the City of Perris at the intersection of Ethanac Road and Barnett Road represent a potential future City of Perris project. However, there is not a nexus to require the proposed development to construct or bear the full cost of implementation of the improvements. Furthermore, the timeline for implementation of the improvement is speculative and would occur after implementation of the proposed project. Therefore, it is not necessary to include realignment of the intersection of Ethanac Road and Barnett Road, as this project is not approved by either City or funded at this time. The project includes mitigation and condition to pay fair share costs for future improvements at the Ethanac Road and Barnett Road intersection proportional to the project-specific impacts. As described in the Traffic Impact Assessment (TIA) prepared for the project (Appendix O of the IS/MND), the project would install a “Keep Clear” pavement marking approximately 85 feet beyond the stop line of the 50 feet left turn pocket at Barnett Road/Ethanac Road. This would ensure that the westbound lane traffic does not block traffic waiting to make a southbound turn given the staggered nature of this intersection. Based on the level of service (LOS) analysis completed for the TIA, future traffic conditions would result in a satisfactory LOS for the Ethanac/Barnett intersection with implementation of proposed improvements.

Additionally, the TIA utilized the Signal Timing Sheets provided by the City of Perris to analyze the intersection of Barnett and Case Road/Ethanac Road. The signal timings are set up to have the intersections operate as one, allowing the southbound through trips, which there are very few, to be coordinated with the westbound left turn from Ethanac Road to Barnett Road. Timing sheets show adequate clear time for anticipated peak hour volumes to make left turns without the effect of stacking along Ethanac Road. Additionally, with the proposed improvements identified in the TIA, the vehicles making westbound left turns from Ethanac Road to Barnett Road would have adequate storage space to queue on Ethanac Road west



of Case Road. The signal timing at the intersection incorporates additional clearance time for the turning movement due to the offset intersection; however, there is adequate storage space between Case Road and Barnett Road for one truck in the rare event that a truck is unable to make the turn movement onto Barnett Road prior to the changing of the signal.

The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 34:** This comment reiterates that the project would generate more traffic than what is analyzed in the MND if refrigerated uses were to occupy the proposed buildings.

Response: As stated above in Response to Appeal 6, the project would be conditioned for the preclusion of cold storage uses. These conditions would be extended to any future site tenants unless additional environmental analysis is provided to assess additional impacts that could result from the use of cold storage. Therefore, analysis of cold storage and mitigation for the preclusion of cold storage uses would not be warranted.

The comment continues with a list of items that were not fully analyzed and thus should be revised. These include:

- a) Submittal of a Scoping Agreement to the City of Perris for review and comments

Response: The project completed the proper scoping process with the City of Menifee, which has approval authority over the project as the Lead Agency. Approval of the scoping agreement by the City of Perris is not required.

- b) Submittal of the Traffic Impact Analysis (TIA) for public review. The comment notes that the TIA should include analysis of truck impacts at the intersection of Ethanac Road and Barnett Road, including determination of the width and length of the turn pockets on Ethanac and Barnett Road. The comment states that the current design of Barnett Road does not provide safe access to westbound Ethanac Road. The comment also states that the City of Perris had previously provided comments requesting that the TIA analyze Barnett Road at Ethanac Road so that it could be aligned with the design of Case Road. The comment notes that the intersection should be concrete paved in order to withstand truck traffic, per Caltrans standards. The comment states that the TIA did not consider the City's previous comments and therefore the design of Ethanac Road would be unsafe for trucks and passenger vehicles. The comment requests that the TIA be revised to show realignments of Barnett Road at Ethanac Road. The comment also requests that a Scoping Agreement be submitted to the City of Perris for review and comment prior to revision of the TIA.

Response: The TIA is based on PCE adjusted traffic counts and evaluates the PCE of the proposed project. Therefore, the TIA does include trucks in the LOS analysis. Furthermore, Section 6 of the Traffic Impact Analysis includes recommendations for geometric improvements to accommodate the safe access and circulation of trucks at the Ethanac Road and Barnett Road intersection. Additionally, as described above, future conditions would not result in unsafe left turn conditions from westbound Ethanac Road to Barnett Road. The improvements proposed by the City of Perris at the intersection of Ethanac Road and Barnett Road represent a potential future City of Perris project. However, there is not a nexus to require the proposed development to construct or bear the full cost of implementation of the improvements. Furthermore, the timeline for implementation of the improvement is speculative and would occur after implementation of the proposed project. Therefore, it is not necessary to include realignment of the intersection of Ethanac Road and Barnett Road, as this project is not approved by either City or funded at this time. The project includes



mitigation and condition to pay fair share costs for future improvements at the Ethanac Road and Barnett Road intersection proportional to the project-specific impacts.

- c) The comment states that the right-of-way width and alignment of Ethanac Road should be coordinated with the roadway designations from the City of Perris General Plan. The comment states that this coordination would determine the extent of roadway and intersection improvements needed at the intersection of Ethanac Road and Barnett Road. The comment states that the TIA should include the City of Perris roadway designations as follows:
  - a. Ethanac Road is classified as an Expressway (184'/134') with a 14 foot wide raised landscaped median
  - b. Case Road is classified as a Secondary Arterial (94'/70') with a 14 foot wide raised landscaped median

Response: The comment states that the City of Perris roadway classifications for Ethanac Road and Case Road should be considered in the realignment of the intersection and stated in the TIA. Please see the response b) above regarding the intersection. Statement of the City's roadway classifications would not change the conclusions of the analysis presented in the TIA.

Therefore, the MND properly analyzed traffic impacts that could result from the project. Proper notification of the project was conducted pursuant to CEQA and the City of Menifee process as the Lead Agency. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 35:** This comment states that the proposed project does not address the public safety issue raised by Ethanac Road and Barnett Road intersection. Although the project contains mitigation and conditions to pay fair share costs for future improvements, it would not alleviate the impacts on Perris, as a responsible agency, and should coordinate with the City of Perris for mitigation, conditions, or payments of costs.

As discussed in Response to Appeal 3, the project includes mitigation and condition to pay fair share costs for future improvements at the Ethanac Road and Barnett Road intersection proportional to the project-specific impacts. As described in the TIA prepared for the project (Appendix O of the IS/MND), future traffic conditions would result in a satisfactory LOS for all analyzed intersections with implementation of proposed improvements. Additionally, It should be noted that the ultimate planned configuration of Ethanac Road is that of a six-lane roadway. The roadway expansion would help reduce the delay experienced at the intersections of I-215 SB Ramps/NB Ramps and Ethanac Road. Fair share fees would be paid towards implementation of planned construction of the I-215 and Ethanac Road Interchange and improvement at Ethanac Road between Case Road and I-215 SB Ramps. The comment does not contain any information requiring changes to the TIA or MND. No further response is warranted.

**Response to Appeal 36:** This comment reiterates that the project applicant must coordinate with the City of Perris and be in compliance with City of Perris requirements. The comment states that the project should be 100 percent responsible for cost of design and construction of aligning Barnett Road and Ethanac Road with chase Road and shall abide by Caltrans standards. Additionally, the project applicant must be responsible for all other construction Road improvements in coordination with Riverside County Transportation Department (RTC) in regard to the Project Study Report (PSR)/Project Development Support (PDS) prepared by RTS in cooperation with Caltrans.

As stated above in Response to Appeal 34 and 35, the project does not warrant realignment of Case Road and further coordination efforts with Caltrans and Riverside County Transportation Department (RCTC) is not



required. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 37:** The comment states that the IS/MND does not identify all the aforementioned roadway improvements required of the project and does not evaluate potential environmental impacts associated with the implementation of those improvements. Therefore, the project would require CEQA analysis pursuant to Section 15003(h) of the State CEQA guidelines. Additionally, the IS/MND should be revised to identify all required roadway improvements and identify the City of Perris as a responsible agency for such improvements. Construction and implementation of roadway improvements should also be evaluated as potential impacts in the IS/MND. Analysis should also be based on standards, regulations, and policies from the City of Perris General Plan for the purpose of avoiding or mitigating an environmental affect.

As stated above in Response to Appeal 34 and 35, the project does not warrant realignment of Case Road. The improvements proposed by the City of Perris at the intersection of Ethanac Road and Barnett Road represent a potential future City of Perris project. However, there is not a nexus to require the proposed development to construct or bear the full cost of implementation of the improvements. Furthermore, the timeline for implementation of the improvement is speculative and would occur after implementation of the proposed project. Therefore, it is not necessary to include realignment of the intersection of Ethanac Road and Barnett Road, as this project is not approved by either City or funded at this time. The project includes mitigation and condition to pay fair share costs for future improvements at the Ethanac Road and Barnett Road intersection proportional to the project-specific impacts. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 38:** This comment states that the project cannot have driveway access to the site on Ethanac Road due to limited frontage on a designated expressway that permits high-speed traffic.

The proposed 45-foot driveway on Ethanac Road similar in design to the driveway existing to the gas station located on the north side of Ethanac Road. Furthermore, a review of the Transportation Injury Mapping System (TIMS) indicates only one collision in the last 5 years at the existing driveway. Furthermore, the accident was caused by one party traveling in the wrong direction and not by the location or design of the driveway. TIMS data is provided in Attachment D.

**Response to Appeal 39:** This states that the IS/MND improperly analyzed the traffic impacts of the project. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 40:** This comment requests that all property owners within 1,400 feet of the proposed project be notified of the project and be given the opportunity to comment. The comment states that the proposed project did not notify nearby sensitive receptors.

The proposed notification radius for mailings is recommended, but not required or substantiated by the commenter. The project was adequately notified based on the City's public notification process, which included a radius of 800 feet (an increase from the standard City 300-foot radius per the City of Menifee Municipal Code Section 9.30.080, Public Hearing and Notice), and pursuant to the requirements of CEQA. The comment does not contain any information requiring changes to the MND or necessitate additional public circulation. No further response is warranted.

**Response to Appeal 41:** This comment states that the proposed project is incompatible with the residential developments in both the City of Perris and the City of Menifee. Additionally, the comment states that the project site is located within the City of Menifee Economic Development Corridor Northern Gateway, which



is intended as an employment center where five percent of the land is planned to be for residential uses. The comment states that the MND did not adequately analyze how the project is compatible with surrounding land uses.

The project IS/MND analyzes project consistency with applicable land use designations, plans, and policies on page 140 through 145. The project is consistent with the underlying land use and zoning designation of EDC and EDC-NG, respectively, as approved within the City of Menifee's General Plan and zoning map. The City's General Plan's EDC land use designation inclusion of five percent residential is reflective of anticipated overall development planned within the larger EDC land use designation area and is not a project site-specific requirement allowed by right within the EDC-NG zone. The EDC-NG zone within the EDC General Plan land use designation is intended for more intensive industrial and business park type uses. Therefore, the MND adequately analyzes compatibility with surrounding land uses. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 42:** This comment states that response 2.13 did not address the requirement that 5 percent of the land use in the City of Menifee Economic Development Corridor Northern Gateway is designated as residential uses or how the project is compatible with the five percent use. The comment states that consistency with applicable land use designation, plans, and policies was not enough analysis for this IS/MND.

As stated above in Response to Appeal 41, the commenter incorrectly assumes that the inclusion of the General Plan EDC land use designation extends to the City's EDC-NG zone. The project would not be required to address consistency with anticipated residential land uses within the EDC land use designation since residential land uses are not permitted by right in the EDC-NG zone, but is permitted in other EDC zones, which would accomplish the overall General Plan EDC residential land use goals. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 43:** This comment reiterates that the IS/MND did not consider sensitive receptors located north of the project site, specifically, residentially zoned areas within the GVSP and in the City of Perris.

As discussed above in Response to Appeal 10, 11, and 32, the GVSP residential land use designation is too speculative and does not warrant inclusion into the IS/MND as a reasonably foreseeable future planned development. However, out of an abundance of caution, additional analysis was completed to analyze potential future emissions, health risk, and noise impacts as a result of the project on potential future residential development north of the project site (see Attachment A). As discussed in the previously provided responses, the project would not result in significant impacts on potential future residential land uses. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 44:** This comment states that response 2.14 was inadequate and did not clarify whether the project complies with the City of Menifee Industrial Good Neighbors policies.

As discussed in the city staff report, the project complies with the City of Menifee Industrial Good Neighbor Policies. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal 45:** This comment states that in light of deficiencies in the project's IS/MND as explored above the City of Perris asks that the Menifee City council reverses its decision and denies the proposed plan. The comment does not contain any information requiring changes to the MND. No further response is warranted.



**Appeal Letter 2: City of Perris, received May 3, 2023**



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May 3, 2023

**VIA HAND DELIVERY AND EMAIL**

Honorable Mayor and City Council  
City of Menifee  
29844 Haun Road  
Menifee, CA 92584

Re: LETTER PROVIDING FURTHER COMMENTS IN SUPPORT OF CITY OF PERRIS' APPEAL OF PLOT PLAN NO. PLN 21-0290 - ETHANAC AND BARNETT SPECULATIVE WAREHOUSES - LOCATED SOUTH OF ETHANAC ROAD AND WEST OF BARNETT ROAD (APNS: 331-060-36 AND 331-060-021)

Dear Honorable Mayor and City Councilmembers:

On behalf of the City of Perris ("City"), this letter is submitted as further support of the City's objection to and appeal of the City of Menifee's Planning Commission March 8, 2023 decision approving Plot Plan No. PLN 21-0290 for the Ethanac and Barnett Development Project ("Project") and adopting a Mitigated Negative Declaration ("MND"). We respectfully request that this letter, the City of Perris' March 20, 2023 appeal letter ("Appeal Letter") and the letter from the City of Perris dated March 6, 2023 commenting on the Initial Study and MND ("Comment Letter") be placed in the record of proceedings for the Project and the MND.

A2.1

1. **Information Regarding Expert Qualifications of City of Perris Team That Reviewed the Initial Study and MND**

The Appeal Letter and Comment Letter identified numerous deficiencies in the February, 2023 Initial Study's ("IS/MND") environmental analysis including an incomplete project description and inadequate analysis of environmental impacts related to air quality, energy, greenhouse gas emissions, health risks, noise and transportation. A team of professionals that included employees of the City of Perris ("City"), and a consultant under contract with the City, with extensive experience analyzing environmental impacts from all types of development projects, including warehouses, carefully reviewed the IS/MND. This team of professionals consisted of Kenneth Phung, Director of Development Services, John Pourkazemi, Interim City Engineer, Patricia Brenes, Planning Manager and Michael Brown, President of Cadence Environmental Consultants, contract consultant with the City of Perris. This team's comments on the Initial Study were then included in the Comment Letter and Appeal Letter. This same team contributed to the additional appeal points contained in this letter. Attached as Exhibit "A" is additional information demonstrating the expertise of each of these reviewers. The following is a

A2.2

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short summary of their background, knowledge and experience related to project planning and environmental analysis.

Kenneth Phung has been employed as a planner for since 1999 and has worked for the City of Perris, both as a consultant an employee, since 2007. During his career Mr. Phung has been responsible for all aspects of managing and processing development project applications as well as the CEQA environmental review. This has involved providing staff training on compliance with CEQA.

John Pourkazemi is a licensed professional engineer with over 30 years of experience in the field of civil engineering and municipal engineering including land development, capital improvement and assessment district engineering. During the course of his career Mr. Pourkazemi has reviewed, developed and processed numerous general plans, engineering plans and maps and technical reports, studies and analyses (hydrology/hydraulic, geotechnical, traffic, environmental) for residential, commercial and industrial development applications from individual lots/parcels to specific plan developments.

Patricia Brenes has been employed as a planner since 1999 and has processed entitlement applications for a variety of a variety of complex projects, including but not limited to, warehouses, hospital expansions, multi-family developments, subdivisions, each of which required the preparation of either a MND or an EIR. Ms. Brenes was responsible for ensuring that each of these environmental documents complied with CEQA. In her current position Ms. Brenes responsibilities include managing the daily operations of the Perris Planning Department.

A2.2  
cont.

Michael Brown has been an environmental consultant for more than 30 years. In this capacity, Mr. Brown has been involved in the preparation of environmental and planning documents throughout California. Mr. Brown maintains technical expertise in the assessment of air quality, greenhouse gas, and environmental noise impacts. He has used this expertise to develop detailed computer models for the assessment of air quality and noise impacts.

Therefore, the comments in the Comment Letter, the Appeal Letter and this letter constitute substantial evidence in the form of expert opinion supported with credible facts and analysis. (CEQA Guidelines, section 15384). Furthermore, all of these comments raise a fair argument supported with substantial evidence that the Project may have one or more significant impacts on the environment.

## 2. Additional Comments Regarding CEQA violations

The City has reviewed the Staff Report prepared for the May 3, 2023 Menifee City Council Hearing on the City's Appeal that was posted to the City of Menifee website on Friday, April 28, 2023 after 4:00 p.m. Because of its late posting on Friday, City staff was not able to review it and

A2.3

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provide these comments until now. In general, after reviewing this Staff Report and its exhibits the City reiterates its position stated in its Appeal Letter and Comment letter that the IS/MND has serious flaws and does not comply with the requirements of the California Environmental Quality Act ("CEQA") or the CEQA Guidelines (14 CCR 15000, et seq.) In addition to the comments in the Appeal Letter and Comment Letter, the City of Perris also submits the following additional comments regarding the failure of the IS/MND to comply with CEQA.

A2.3  
cont.

## 2.1 Improper Analysis of Impacts Associated with the Reasonably Foreseeable Use of Warehouses for Cold Storage

The Appeal Letter at pages 2 and 3 state the Project Description is inadequate because it fails to address whether the two warehouses may foreseeably be used for cold storage. As stated in the Appeal Letter, whether the warehouse space is used for cold storage significantly effects the environmental analysis for the Project as cold storage facilities generate substantially greater impacts related to air quality, greenhouse gas emissions and truck traffic. At the time of the City's review of the IS/MND in preparing its Comment and Appeal Letters the Project included a condition of approval that defers environmental analysis of the environmental impacts associated with the use of transport refrigeration units to some point in the future should a tenant seek to equip the warehouse with such units. The Staff Report now states that this condition has been revised to read as follows:

A2.4

(4a) Cold storage and Transport Refrigeration Units (TRU) are prohibited use(s) as a part of this plot plan. Additional environmental analysis shall be required by the tenant and/or property owner prior to the establishment of the use and the operation of TRU's; the property owner shall submit an application to modify the approved plot plan prior to the establishment of cold storage and TRU's on-site (Updated for City Council hearing May 3, 2023)

By including this condition, the City of Menifee has now conceded that use of the warehouses for cold storage is reasonably foreseeable. Furthermore, as the City has stated, there is a fair argument that use of the warehouses for cold storage may cause a reasonably foreseeable significant impact related to Air Quality and Greenhouse Gas ("GHG") emissions for the reasons set forth in the Appeal Letter. For example, the IS/MND's GHG analysis relies upon a numeric threshold of 3000 metric tons of CO<sub>2e</sub> annually. The analysis then states that the project, not including cold storage uses, would generate 2985.38 metric tons of CO<sub>2e</sub> annually. This is less than 15 metric tons below the threshold for causing a significant GHG impact. If the use of the warehouses for cold storage was included in this analysis, the project's generation of the CO<sub>2e</sub> would exceed the 3000 metric tons threshold requiring mitigation measures to be imposed on the project or the preparation of an Environmental Impact Report. However, instead of analyzing the potential significant impacts associated with use of the warehouses for cold storage, the City of Menifee has included Condition 4a which improperly defers analysis of these impacts into the

A2.5

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future. Condition 4a appears to be an attempt at mitigating impacts associated with the cold storage use as it represents a modification to the project in the form of prohibiting a particular use so as to avoid potentially significant environmental impacts. However, it fails to comply with the requirements for mitigation measures set forth in CEQA Guidelines, section 15126.4, including subsection (a)(1)(B). Finally, to the extent the City of Menifee has conceded that the reasonably foreseeable use of these warehouses for cold storage may cause significant environmental impacts, the IS/MND must be revised to disclose this potentially significant impact and the mitigation measures to reduce or avoid these impacts and recirculated pursuant to CEQA Guidelines, section 15073.5(a) and (b).

A2.5  
cont.

## 2.2 The Greenhouse Gas Impact Analysis Fails to Comply with CEQA

To address the threshold question of whether the Project would conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases, the Initial Study at pages 121-125 provides an analysis of consistency with the California Air Resources Board's ("CARB") Scoping Plan adopted in 2017. However, the 2017 Scoping Plan is out of date as CARB adopted a new scoping plan on December 15, 2022 that establishes new initiatives to achieve substantially greater reductions in GHG emissions. The Final 2022 Scoping Plan and supporting documents and appendices may be accessed at the following weblink: <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents> and are incorporated into this letter by this reference.

A2.6

The IS/MND, dated February, 2023, fails to mention the 2022 Scoping Plan much less analyze the Project's consistency with it. As such, the IS/MND's analysis of whether the Project conflicts with a Plan adopted to reduce GHG emissions is legally inadequate.

## 2.3 The Analysis of Noise Impacts Fails to Comply with CEQA

The Initial Study at p. 148 states that to analyze construction noise the Initial Study shall rely upon an absolute noise threshold of 80 dBA LEQ which is utilized by the Federal Transportation Administration ("FTA") when it analyzes potential noise impacts due to daytime construction. However, the FTA, as a federal agency, is not subject to CEQA. Reliance on an absolute threshold such as the one relied upon in the Initial Study appears to run counter to the holding in *King & Gardiner Farms, LLC v. County of Kern* (2020) 45 Cal.App.5th 814. In that case the court held that the County of Kern's use of an absolute noise threshold to analyze both construction and operational noise impacts failed to comply with CEQA. *King & Gardiner, supra*, at p. 893-94. As such, the analysis of construction noise needs to be revised consistent with the courts holding in *King & Gardiner, supra*.

A2.7

In addition, the noise analysis is inadequate as it failed to analyze reasonably foreseeable noise impacts to sensitive receptors that will occupy residential development along the north side

A2.8

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of Ethanac Road as identified in the Green Valley Specific Plan. Attached as Exhibit B is a copy of Figure 5 of the Green Valley Specific Plan which indicates that multi-family residential development is planned for this area which is no more than 500 feet from the Project site. The entirety of the Green Valley Specific Plan is available at the following web address and is incorporated into this letter by this reference:

A2.8  
cont.

<https://www.cityofperris.org/home/showpublisheddocument/2629/637217272577300000>.

Instead the IS/MND's noise analysis has identified six sensitive receptor locations, the closest of which (R4) is over 1000 feet from the Project site's boundary. (IS/MND Noise Study, p. 37-38). In its response to Appeal Letter comment 32, the City of Menifee claims that the noise analysis assumed sensitive receptors were located within 374 feet of the project site and makes reference to noise analysis included in an Attachment A. However, the only Attachment A the City could locate contains additional air quality analysis, not noise analysis. CEQA requires the City of Menifee to analyze whether the project will have noise impacts to the future residents of these reasonably foreseeable multi-family residential units identified in the Green Valley Specific Plan.

A2.9

#### **2.4 The Analysis of Transportation Impacts to streets and intersections located in Perris is Inadequate.**

In the Appeal Letter the City has set forth a fair argument that the project will result in significant traffic safety impacts due to the introduction of heavy truck traffic to the intersection of Barnett Road and Ethanac Road causing the intersection to not function in a safe manner due to the existing confound and staggered configuration of the intersection of Barnett Road and Case Road at Ethanac Road. As further support for this fair argument, the Appeal Letter states there is limited distance for trailer trucks to make the necessary lane change from the I-215 southbound off-ramp to Case Road and then to the left turn lane at Barnett Road. Furthermore the left turn pocket provides limited stacking for trailer trucks to make a safe left turn movement. The Appeal Letter goes on to state that the slow-moving trailer trucks and the changing of the lanes will cause congestion, extended backup, and queuing resulting in unsafe vehicle movements, which will foreseeably cause increased vehicular collisions. (Appeal Letter, p. 8)

A2.10

In response to this comment, which the City of Menifee identified as Appeal 33, the City of Menifee states the following:

This comment states that the intersection of Barnett Road and Ethanac Road will not function safely and satisfactory due the existing configuration of the intersections of Barnett Road and Case Road at Ethanac Road. Specifically, trailer trucks have limited distance to make necessary lane changes from I-25 off-ramp to Case Road and then to Barnett Road. Additionally, the left turn pocket provides

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limited stacking for trailer trucks to make safe left turn movements. This would cause congestion, extended backup, and queuing, causing unsafe vehicular movements. The improvements proposed by the City of Perris at the intersection of Ethanac Road and Barnett Road represent a potential future City of Perris project. However, there is not a nexus to require the proposed development to construct or bear the full cost of implementation of the improvements. Furthermore, the timeline for implementation of the improvement is speculative and would occur after implementation of the proposed project. Therefore, it is not necessary to include realignment of the intersection of Ethanac Road and Barnett Road, as this project is not approved by either City or funded at this time. The project includes mitigation and condition to pay fair share costs for future improvements at the Ethanac Road and Barnett Road intersection proportional to the project-specific impacts. As described in the Traffic Impact Assessment (TIA) prepared for the project (Appendix O of the IS/MND), the project would install a "Keep Clear" pavement marking approximately 85 feet beyond the stop line of the 50 feet left turn pocket at Barnett Road/Ethanac Road. This would ensure that the westbound lane traffic does not block traffic waiting to make a southbound turn given the staggered nature of this intersection. Based on the level of service (LOS) analysis completed for the TIA, future traffic conditions would result in a satisfactory LOS for the Ethanac/Barnett intersection with implementation of proposed improvements.

A2.10  
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The City has presented substantial evidence in the form of expert opinion supported with facts to support a fair argument that the Project may cause a significant safety impact at the intersection of Ethanac and Barnett Roads. The fact that the City of Menifee has attempted to introduce evidence to the contrary does not defeat the City's fair argument.

Furthermore, the City has established with substantial evidence that there is a clear and direct nexus to the City of Menifee Proposed Development (Project) to, at a minimum, construct the realigned Barnett Road south of Ethanac Road to align with Case Road at ultimate design, because the trailer truck access, as well as other vehicular access, to the Project is from I-215 Interchange at Ethanac Road, Ethanac Road and Barnett Road. Completion of the realigned Barnett Road at Ethanac Road, to align with Case Road, is required to mitigate the traffic delays and impacts and safety hazards associated with generated trailer trucks and autos traffic of the Project. Payment of fair share cost for future improvements will not alleviate the traffic impacts that will be generated and experienced with the Project. These are due to inadequate spacing from the interchange offramp to existing intersection of Case Road and Barnett Road at Ethanac Road and the delays and queuing impacts that will be generated by the trailer trucks and the other vehicles accessing the Project. The length of the existing left turn pocket on Ethanac Road at Barnett Road is only 50 feet, minimum length of a trailer truck is 72 to 80 feet therefore not even one trailer truck can fit in this turn lane pocket without encroaching into the intersections. And the length of

A2.11

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the existing left turn pocket on Ethanac Road at Case Road is about 100 feet, again barely enough space for only one trailer truck. Latter are the impacts on westbound Ethanac Road; the same issues apply to eastbound Ethanac Road between the existing intersections of Barnett Road and Case Road. These accumulated situations, if not mitigated by the Project as indicated before the Project is completed and operational, will create immense delays and raise vast and significant safety concerns with the trailer truck movements and auto movements, and pedestrian access, in a restricted and limited space on Barnett Road, Case Road, Ethanac Road and the I-215 interchange.

A2.11  
cont.

The fact that the City of Menifee has conditioned the project to pay fair share costs for future improvements at the Ethanac Road and Barnett Road intersection does not constitute adequate mitigation for this significant impact pursuant to *Anderson First Coalition v. City of Anderson* (2005) 130 Cal.App.4<sup>th</sup> 1173, 1194. As stated in *Anderson First*, for such contributions to constitute adequate mitigation, the amount of the contribution must be stated and the contribution must be part of a reasonable, enforceable plan or program that is sufficiently tied to the actual mitigation of the traffic impacts at issue. As the City of Menifee has failed to meet these requirements, this potentially significant impact has not been mitigated. To the extent this significant impact is therefore unavoidable an Environmental Impact Report must be prepared for this Project.

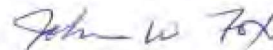
A2.12

In conclusion, for the reasons set forth in this letter, the Appeal Letter and the Comment Letter, the City of Perris again requests that the Menifee City Council reverse the decision of the Planning Commission and deny the Proposed Plan in light of the significant deficiencies in the Project and the IS/MND. The City of Perris continues to look forward to working with Menifee to facilitate the preparation and consideration of a Project and an environmental analysis that complies with CEQA.

A2.13

Respectfully,,

ALESHIRE & WYNDER, LLP



John Fox, Partner

Enclosures  
JWF:JWF

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## **EXHIBIT A**



John Pourkazemi  
Interim City Engineer, City of Perris  
john@trilakeconsultants.com

Mr. Pourkazemi has a degree in Civil Engineering and is a licensed/professional civil engineer and qualified Storm Water Pollution Prevention Program ("SWPPP") preparer and qualified SWPPP practitioner ("QSD/P"). He has over 30 years of experience in the field of civil engineering and municipal engineering with significant experience in land development, capital improvement and assessment district engineering. In the course of his career, Mr. Pourkazemi has reviewed, developed and processed general plans, engineering plans and maps and technical reports, studies and analyses (e.g. hydrology/hydraulic, geotechnical, traffic, environmental) for residential, commercial and industrial development applications from individual lots/parcels to specific plan developments. Mr. Pourkazemi has coordinated projects and infrastructure improvements with regulatory and other federal, state and local agencies, districts and utility purveyors and has processed funding from federal, state and local sources. In addition, Mr. Pourkazemi has managed and programmed Capital Improvement Plans from initial planning and budgeting to final completion, including managing and coordinating the appropriation of funds, RFPs/RFQs, contract agreement, plan preparation, bid process, construction management and the filing of the notice of termination/completion.





## Michael Brown

### Profile

Mr. Michael Brown is the President of Cadence Environmental Consultants and serves in both managerial and technical roles at the firm. As an environmental consultant for more than 30 years, Michael has been involved in the preparation of environmental and planning documents throughout California. In addition to his management role, Michael maintains technical expertise in the assessment of air quality, greenhouse gas, and environmental noise impacts. He has used this expertise to develop detailed computer models for the assessment of air quality and noise impacts. He is also a guest lecturer on air quality, greenhouse gas, and environmental noise impact analysis at the University of Southern California Sol Price School of Public Policy. Michael also provides environmental report peer review services for jurisdictions in Southern California, mitigation monitoring services, and code compliance services.

### Representative Project Experience

The following list identifies a representation of projects that Michael has either managed or had a primary role in the evaluation of environmental impacts:

#### CEQA ENVIRONMENTAL GUIDELINES

City of Camarillo CEQA Environmental Guidelines

#### GENERAL PLANS

Corona General Plan Update

Lancaster MEA and General Plan EIR

Lancaster/Palmdale Enterprise Zone EIR

Orcutt Community Plan, Santa Barbara County

Santa Clarita Valleywide General Plan, City of Santa

Clarita and Los Angeles County

Sierra Madre MEA and General Plan EIR

South Pasadena General Plan EIR

#### SPECIFIC PLANS, RESIDENTIAL, AND MIXED-USE PROJECTS

1155 S. Grand Avenue (Lot 114) MND, City of Los Angeles

3600 Wilshire Boulevard - Legacy Partners MND, City of Los Angeles

Arneill Road Mixed-Use Project ND, City of Camarillo

Camarillo Hotel and Conference Center EIR, City of Camarillo

Camarillo Village Homes EIR, City of Camarillo

Camino Ruiz Apartment Community EIR, City of Camarillo

Country Club of the Desert Specific Plan EIR, City of La Quinta

Downey Landings Specific Plan EIR, City of Downey

East Village Phase II Annexation EIR, City of Oxnard

La Brea Gateway EIR, City of Los Angeles

LA Lofts - 1028-1044 Hope Street MND, City of Los Angeles

Newhall Ranch Specific Plan EIR, Los Angeles County

Pacific City EIR, City of Huntington Beach

Palo Comado Ranch EIR, City of Agoura Hills

Parker Ranch EIR, City of Simi Valley

Playa Vista Second Phase Project EIS/EIR, City of Los Angeles/Los Angeles County

Porta Bella EIR, City of Santa Clarita

Rancho La Sierra Specific Plan EIR, City of Riverside

Rancho Malibu EIR, Los Angeles County

Sakioka Farms Specific Plan EIR, City of Oxnard

Simi Village Interior and Exterior Noise Analysis, City of Simi Valley

The Strand at Huntington Beach (Blocks 104 and 105) EIR, City of Huntington Beach

Tentative Tract 5812 & Change of Zone 5248 EIR, City of Camarillo

University Community Plan EIR, Merced County

University Park Master Development Plan EIR, City of Stockton

Vallejo Station and Waterfront Project EIR, City of Vallejo

Village at the Park Specific Plan and EIR, City of Camarillo

Village Gateway MND, City of Camarillo

Westridge EIR, Los Angeles County



**COMMERCIAL/OFFICE/INDUSTRIAL PROJECTS**

Amara Shopping Center SMND, City of Camarillo  
 Barstow Walmart Expansion and Retail Center EIR, City of Barstow  
 Camarillo Premium Outlets EIR, City of Camarillo  
 Camarillo Promenade SEIR, City of Camarillo  
 Camarillo Town Center (CPD-178/T-4690 Mod. NORCAN) EIR, City of Camarillo  
 Tentative Tract 5812, Springville LLC EIR, City of Camarillo  
 Camino Real Business Park Specific Plan EIR, City of Oxnard  
 The Centre at La Quinta, City of La Quinta  
 Flying J Travel Center Air Quality Impact Analysis, Shasta County  
 LA Media Center MND, City of Los Angeles  
 Oxnard Factory Outlet Center MND, City of Oxnard  
 Paseo Camino Real MND, City of Camarillo  
 Ridgecrest Walmart EIR, City of Ridgecrest  
 Santa Monica MINI Dealership EIR, City of Santa Monica  
 Springville Commercial SEIR, City of Camarillo  
 The Shops at Santa Anita FEIR, City of Arcadia  
 Tehachapi Walmart EIR, City of Tehachapi  
 Trojan Storage Camarillo, MND Addendum, City of Camarillo  
 Wellpoint Health Networks EIR, City of Camarillo

**EDUCATIONAL/INSTITUTIONAL PROJECTS**

Academy of Sciences EIR, City and County of San Francisco  
 Agua Dulce High School MND, Soledad-Agua Dulce Union School District  
 Arnaz Elementary School/Oak View Elementary School Modernizations, Expansion and Consolidation MND, Ventura Unified School District  
 California Lutheran University Master Plan EIR, City of Thousand Oaks  
 Chatsworth Hills Academy EIR, City of Los Angeles  
 East End Elementary School MND, Ventura Unified School District  
 Environmental Noise Constraints and Opportunities Analysis for Lang Ranch Community Park, Conejo Recreation and Park District  
 Manhattan Beach Middle School EIR, Manhattan Beach Unified School District  
 New Camarillo Library EIR, City of Camarillo  
 Royal High School Stadium EIR, Simi Valley Unified School District  
 Southwest Campus Housing and Parking EIR, UCLA

Santa Monica Library EIR, City of Santa Monica  
 St. John's Pleasant Valley Hospital EA, FEMA  
 St. John's Seminary Maintenance Facility MND, City of Camarillo  
 UCLA 2002 Long Range Development Plan and Northwest Housing Infill Project EIR, UCLA  
 UC Riverside Long Range Development EIR, UCR  
 UCSB Ellwood Devereux and Housing EIR, UCSB

**PUBLIC IMPROVEMENT PROJECTS**

Antelope Valley Sheriff's Station EIR, City of Lancaster  
 Carmen Drive/Ventura Freeway Interchange Improvements EIS/EIR, City of Camarillo/Caltrans  
 Cathedral Oaks Drive Noise Analysis, Santa Barbara County  
 City of Camarillo Reclaimed Water Storage Reservoir MND, City of Camarillo  
 Conejo Creek Sewer Line Replacement MND, City of Camarillo  
 Corona Civic Center EIR, City of Corona  
 Crestview Avenue Widening and Realignment, and Extension of Earl Joseph Drive MND, City of Camarillo  
 Golden Gate Park Concourse Authority Projects EIR, City and County of San Francisco  
 Kidstream Children's Museum Class 32 Categorical Exemption, City of Camarillo  
 Las Posas Road Improvements MND, City of Camarillo  
 North Pleasant Valley Groundwater Treatment Facility Second Supplemental EIR, City of Camarillo  
 Pasadena City Hall Seismic Retrofit EIR, City of Pasadena  
 Pleasant Valley Mutual Water Company Desalter Project MND, City of Camarillo  
 City of Roseville Capital Improvement Program EIR  
 Surfer's Point Beach Nourishment Project, City of San Buenaventura  
 City of Tehachapi Event Center & Rodeo Grounds Environmental Noise Impact Analysis, City of Tehachapi  
 Victoria Avenue/Ventura Freeway Interchange Improvements EIR, City of San Buenaventura/Caltrans

**TRANSIT PROJECTS**

Northeast Corridor Service and Facilities Enhancement IS/EA, Sacramento Regional Transit District



**STUDIO USE PROJECTS**

NBC Studios Master Plan EIR, City of Burbank  
Warner Bros. Studio Master Plan Expansion EIR, City of Burbank

**REDEVELOPMENT PROJECTS**

Grand Central Market/Million Dollar Theater EIR, City of Los Angeles  
Heart of the City Specific Plan and Redevelopment Plan EIR, City of Redondo Beach

**SURFACE MINING PROJECTS**

Bettencourt Ranch Mine Project EIR, Merced County  
Blue Mountain Minerals Expansion Project EIR, Tuolumne County

**PETROLEUM EXTRACTION PROJECTS**

Wilmington Townlot Unit MND, City of Los Angeles

**AIRPORT PROJECTS**

Skytrails Aviation Hangar Project, Los Angeles World Airports

**MITIGATION MONITORING**

El Paseo Simi Project, City of Simi Valley

**PEER REVIEW**

Downtown Specific Plan EIR, City of Perris  
Duke Warehouse at Indian Avenue & Markham Street EIR, City of Perris  
Duke Warehouse at Patterson Avenue & Markham Street EIR, City of Perris  
Duke Warehouse at Perris Boulevard & Markham Street EIR, City of Perris  
First Harley Knox Industrial MND, City of Perris  
First Industrial Warehouse at Wilson Avenue Project MND, City of Perris  
First Industrial Warehouse 2 at Wilson Avenue Project MND, City of Perris  
First Industrial Warehouse at Rider Street and Redlands Avenue Project EIR, City of Perris  
First Perry Logistics Project MND, City of Perris  
Green Valley Specific Plan Phase 1A EIR Addendum, City of Perris  
Green Valley Specific Plan Phase 1B EIR Addendum, City of Perris  
Green Valley Specific Plan Phase 2 EIR Addendum, City of Perris  
Harley Knox Boulevard Industrial Project MND, City of Perris  
Harvest Landing Specific Plan EIR, City of Perris  
IDI - Indian Avenue and Ramona Expressway Warehouse Project MND, City of Perris

IDI Rider 2 & S High Cube Warehouses and Perris Valley Storm Drain Channel Improvement Project EIR, City of Perris

Integra Perris Distribution Center Project EIR, City of Perris

IPT Perris DC Project SEIR, City of Perris

IPT Perris DC III Western/Nandina Project MND, City of Perris

Markham Business Center EIR, City of Perris

Mid County Parkway EIS/EIR, City of Perris

Oakmont Industrial Building Project EIR, City of Perris

Operon HKI - Perris MND, City of Perris

Optimus Logistics Center EIR, City of Perris

Optimus Logistics Center 2 EIR, City of Perris

Overton Moore Industrial Project, City of Perris

Pelican Industrial Project EIR, City of Perris

Perris Boulevard and Morgan Street Industrial Park Project, City of Perris

Perris Downtown Specific Plan EIR, City of Perris

Perris Gateway Commerce Center MND, City of Perris

Perris Ridge Commerce Center EIR, City of Perris

Perris Valley Commerce Center Specific Plan EIR, City of Perris

Rados Distribution Center EIR, City of Perris

Ramona-Indian Warehouse Project MND, City of Perris

Ramona Expressway and Brennan Avenue Warehouse Project MND, City of Perris

Ramona Gateway Project EIR, City of Perris

Ramona Promenade EIR, City of Perris

Redlands East Industrial Project MND, City of Perris

South Perris Industrial Center EIR, City of Perris

Starcrest Distribution Facility EIR, City of Perris

Stratford Ranch Industrial EIR, City of Perris

Tentative Tract Map No. 37803 MND, City of Perris

Towne Center EIR, City of Perris

The Venue at Perris EIR, City of Perris

Villa Verona Apartment Community MND, City of Perris

Walnut and Indian Avenue Industrial Project MND, City of Perris

Wayne J Sand & Gravel EIR, County of Ventura

**CODE COMPLIANCE**

Camarillo Airport Nighttime Noise Level Measurement Analysis, City of Camarillo

International Paper Camarillo Container Plant Nighttime Noise Level Measurement Analysis, City of Camarillo



**Education**

B.A., Geography, California State University, Northridge, 1990



**PATRICIA P. BRENES**  
 3725 Wallowa Circle, Corona, CA 92881  
 951.316.6026 (mobile)  
[Pbrenes26@yahoo.com](mailto:Pbrenes26@yahoo.com)

## **OBJECTIVE**

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Seeking a leadership position in a forward-thinking, progressive organization, where application of my analytical, innovative, problem-solving, and communication skills can be used as tools to build an equitable, sustainable, safe, and well-balanced community.

## **PROFESSIONAL EXPERIENCE**

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### ***Planning Manager (City of Perris)***

***7-2022 to Present***

- Assume management responsibility for all services and activities of the Planning Division including preparation and administration of the City's General Plan and Zoning Ordinance.
- Manage and participate in the development and implementation of goals, objectives, policies, and priorities for assigned programs; recommend, within departmental policy, appropriate service and staffing levels; recommend and administer policies and procedures.
- Conduct a variety of organizational studies, investigations, and operational studies; recommend modifications to planning programs, policies, and procedures as appropriate.
- Review and analyze development plans for compliance with the general plan, zoning and other City regulations and policies; direct the review of use permits, subdivisions, rezoning requests, variances, and other land use entitlements.
- Administer provisions of the California Environmental Quality Act (CEQA), and various other environmental planning activities.
- Plan, direct, coordinate, and review the work plan for the Planning Division; meet with staff to identify and resolve problems; assign work activities, projects and programs; monitor work flow; review and evaluate work products, methods and procedures.
- Attend public hearings; advise the Planning Commission and the City Council on planning activities; confer with City officials as well as the public on City planning activities.
- Confer with engineers, developers, architects, a variety of agencies and the general public in acquiring information and coordinating planning and zoning matters; provide information regarding City development requirements.

### ***Principal Planner (City of Riverside)***

***3-2016 to 7/2022***

- Planned, directed, and reviewed Current Planning activities and Planning Counter inquiries.
- Supervised and led the Project Management Team, and Public Information and Zoning Team (Planning Counter), consisting of 10 Planners and clerical staff; provide policy direction on projects, environmental documents, and zoning related inquiries; and provide policy direction on administrative issues.
- Managed key development projects and activities involving EIRs.
- Developed procedures and schedules for notices and staff reports; and establish format for presentations.
- Established systems to ensure deadlines are met.
- Provided project updates and technical advice to the City Council, City Manager's Office, and Housing Authority Division. Also provided assistance to other Department staff on zoning matters or planning related projects.
- Conferred with and advised architects, builders, engineers and the general public on the City's development policies and regulations.
- Developed recommendations on development permits: Conditional Use Permit, Tentative Maps, Planned Residential Development, amendments to Specific Plans, General Plan, and Zoning Code, and other zoning applications.



- Interpreted General Plan/Specific Plan goals and policies and Zoning Code regulations. Enforced the Codes and answer inquiries regarding interpretations and applicability.
- Served as support staff and provide technical advice to the Planning Commission. Responsible for finalizing staff reports, presentations, notices, and agendas.
- Served as support staff and provided technical advice to the Development Review Committee. Responsible for finalizing staff reports, notices, and agendas.
- Worked closely with Code Enforcement staff to advise on City's Codes as it pertains to unpermitted improvements, prevent blight, and protect property values.
- Handled work schedules, organization, and personnel issues.
- Hired, supervised and evaluated staff on their performance.

*Principal Planner (City of Redlands)**8-2014 to 3-2016*

- Managed complex development projects and conducted analysis on land use related matters.
- Assisted, coordinated, and managed the Development Review Committee.
- Interpreted General Plan/Specific Plan goals and policies and Zoning Code regulations.
- Developed and presented recommendations on development permits: Conditional Use Permit, Tentative Maps, Certificate of Appropriateness, and other zoning applications to the Historic Scenic and Preservation Commission, Environmental Review Committee, Planning Commission, and City Council; prepared the appropriate staff reports and Environmental Initial Studies, when applicable, for compliance with the California Environmental Quality Act (CEQA).
- Reviewed sign permit and temporary sale permit applications administratively for compliance with the Zoning Code or applicable governing Specific Plan.
- Plan checked projects for compliance with codes and regulations.
- Conducted site inspections for compliance with conditions of approval.
- Enforced zoning ordinance, answered inquiries and complaints regarding its interpretation and applicability.
- Performed related duties as assigned.

*Senior Planner (City of Riverside)**8-2005 to 8-2014*

- Provided technical assistance and information on specific projects to the Mayor, City Council, City Manager's Office, and Greater Riverside Chamber of Commerce.
- Managed and supervised the Project Management Team, approximately 980 Board and Administrative cases processed in 2013.
- Worked closely with Code Enforcement staff to encourage compliance with the City's Codes, prevent blight, protect property values, and enhance economic development.
- Worked effectively with high level local and regional policymakers, professionals, and stakeholder representatives.
- Coordinated and scheduled Preliminary Development Meetings with prospective applicants and other City Departments' staff and commented on behalf of the Planning Division.
- Prepared and conducted employee performance evaluations.
- Interpreted General Plan/Specific Plan goals and policies and Zoning Code regulations.
- Provided technical and management support for the preparation of Environmental Impact Reports (EIRs). Managed the budget allocated for EIRs and reviewed and approve payment of invoices related to the project.
- Analyzed, reviewed, and made recommendations on land use and special projects, including Zoning Code interpretations, amendments to Specific Plans, General Plan and Zoning Code, Certificate of Appropriateness, and new residential, commercial, and industrial Subdivisions.
- Presented before the City Planning Commission, Cultural Heritage Board, Land Use Committee, and City Council.
- Conducted Planning Commission Workshops for the purpose of soliciting comments on complex projects.
- Coordinated and directed the City/UCR Committee Meetings



***Associate Planner (City of Riverside)******10-2000 to 8-2005***

- Prepared staff reports, including environmental documents, and presented them before the City's Boards, Commissions and Council.
- Assisted in the preparation of the City's General Plan 2025, Zoning Code, Subdivision Code, Citywide Design and Sign Guidelines.
- Analyzed, reviewed, and made recommendations on land use and special projects, including Zoning Code interpretations, amendments to Specific Plans, General Plan and Zoning Code, Certificate of Appropriateness, and new residential, commercial, and industrial Subdivisions.
- Conferred with and advised architects, builders, engineers and the public on the City's development policies and regulations.
- Coordinated the review of projects with other departments, community organizations, and public agencies, and determined environmental status for all assigned projects.

***Assistant Planner (City of Riverside)******4-1999 to 10-2000***

- Analyzed, reviewed, and made recommendations on development projects.
- Prepared staff reports and presented them before the City's Boards and Commissions.
- Provided technical assistance and advice to the public on the City's Zoning Code provisions, General Plan policies and other key planning documents.
- Coordinated the review of projects with other departments and agencies, and determined environmental status on various development projects.
- Advised residents and businesses to help them gain compliance when in violation of the City's Codes and regulations.
- Conducted environmental review, for all assigned projects including preparation of initial studies and Negative Declarations.

**EDUCATION**

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- **California Baptist University, Riverside** – *Master's Degree in Public Administration (In Progress)* – Graduation Date: July 2023
- **California State Polytechnic University, Pomona** - *B.S. Urban and Regional Planning—1999*  
California State Polytechnic University President's Honor List: 1997-1998 and 1998-1999  
College of Environmental Design Dean's Honor List: 1996-1997, 1997-1998 and 1998-1999

**OTHER SKILLS**

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- Strong skills mentoring and coaching staff to foster a positive community and environment
- Possess a high level of accountability, integrity honesty and ethical standards
- Excellent writing and communication skills
- Excellent customer service skills
- Proficient in Spanish



## **KENNETH K. PHUNG**

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### **OBJECTIVE**

#### **DIRECTOR OF DEVELOPMENT SERVICES**

A position with the opportunity for professional growth

### **EDUCATION**

#### **BACHELOR OF SCIENCE**

California State Polytechnic University, Pomona

**Major: Urban and Regional Planning**

Graduation Date: June 1998

#### **MASTER OF SCIENCE**

Redlands University

**Major: Leadership Organization**

Graduation Date: April 2021

**Achievements:** President's Honor List 1996-1997; Golden Key National Honor Society; The National Deans List

### **EXPERIENCE**

#### **DIRECTOR OF DEVELOPMENT SERVICES (9/2021 to Present)**

##### **PLANNING MANAGER (11/2017 to 9/2021)**

City of Perris, Development Services, Perris, California

- Leading the City's Planning, Building, and Code department operations responsibly and proactively while aggressively working to improve and enhance the City's General Plan.
- Work constructively and collaboratively within the Management Team to bring the City's strategic goals and objectives to fruition.
- Oversee all aspects of CEQA compliance for public and private development projects in the City; and neighboring jurisdictions that may create impacts on Perris
- Managing and resolving various interests in the administration and development of the City's General Plan.
- Manage, plan, and coordinate the programs and activities of the Planning Division; Coordinate assigned activities with other City divisions, departments, and outside agencies.
- Provide highly responsible and complex administrative support to the Assistant City Manager.

##### **PROJECT PLANNER / PLANNING MANAGER / PROJECT MANAGER – *CONSULTANT***

City of Perris – *Independent Contract Planner (6/2007 to 11/2017)*

- Served as Interim Planning Manager overseeing planning staff and providing sound planning principles, and explaining CEQA requirements while Planning Manager was away.
- Manage entitlements of controversial, time-sensitive, and large-scale industrial projects (i.e., 1.7 million square feet), commercial shopping centers (i.e., 670,000 square feet of retail with multiple building pads), master-planned residential communities, mixed-use senior housing projects, and residential subdivisions as a contract City Planner from initial application through the Environmental Impact Review process as applicable, including site-plan layout, architectural design review, and public hearing process for approval.
- Oversee annexation of land within the Sphere of Influence consisting of reviewing annexation strategy reports, providing feedback and updates to executive management teams, preparing



monitoring schedules, providing updates of processing, preparing written reports, overseeing environmental consultants, and making public hearing presentations.

**City of La Habra Heights – Contract Planning Manager (8/2008 to 3/2010)**

- Oversee Assistant Planner and Planning Intern. Establish coordination process for the review of new and existing applications. Review the department budget and forecast additional funds for the Planning Department.
- Manage entitlements of hillside residential developments from initial application through the environmental review process, site-plan layout, and public hearing process approval.

**MANAGER OF FORWARD PLANNING and LAND DEVELOPMENT (9/2004 to 5/2007)**

KB Home South Valley Division – Bakersfield & Fresno, California

- Review proposed tract maps for purchase by evaluating compliance with City codes, procedures for plan approval, and permits required for construction to tract acceptance.
- Prepare due diligence reports for submittal to corporate office to authorize purchase of properties.
- Oversee Timeline/Land Development Meeting, Architectural Review Meeting, and Budget Meeting.
- Train staff on review of improvement plans, scheduling, and due diligence material to determine purchase of property.
- Manage Consultants and subcontractors to complete tract development (*Engineers, Environmental, Dry Utility Consultants, Legal, Grader, Concrete, Pavers, etc.*)

**SENIOR ASSOCIATE PROJECT PLANNER (8/2002 to 9/2004)**

Hogle-Ireland Inc. – Riverside, California

Contract City Planner to the City of Perris and the City of San Jacinto

- Manage several large residential projects including a Specific Plan development (Villages of Avalon, Barratt American, Inc.) of 1,200 homes, an active park, passive park, HOA park and two school sites; a 371-home subdivision by Classic Pacific; and a 463-home subdivision with a school site and a public golf course as well as other less extensive development projects. Large-scale industrial projects (400,000 plus sq. ft.)
- Conduct analysis of long-range planning issues related to General Plan and Specific Plan Amendments.
- Prepare staff reports for presentation before both the Planning Commission and City Council, as well as follow through on plan checking and project implementation.

**ASSOCIATE PLANNER (4/2001 to 7/2002)**

City of Chino, Development Services - Chino, California

- Review development activities for City to ensure they are consistent with the General Plan and development code, which includes re-zoning, variances, CUP, Subdivisions, design reviews, etc.
- Prepare staff reports for presentation before both the Planning Commission and City Council, as well as follow through on plan checking and project implementation.
- Update the annual general plan and review telecommunication ordinance.

**ASSISTANT PLANNER (2/1999 to 4/2001)**

City of Arcadia, Development Services - Arcadia, California



- Review development activities for City to ensure they are consistent with the General Plan and development code, which includes re-zoning, variances, CUP, Subdivisions, design reviews, etc.
- Prepare staff reports for presentation before both the Planning Commission and City Council, as well as follow through on plan checking and project implementation.



## **EXHIBIT B**



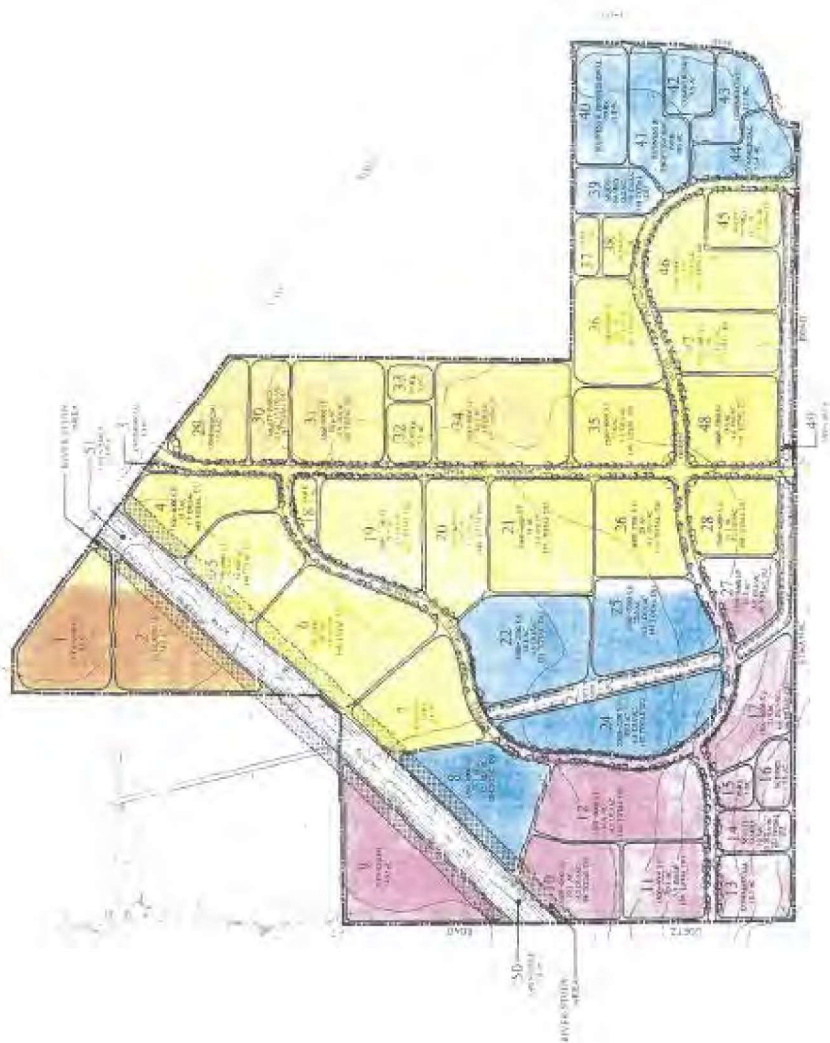
# PHASING PLAN



FIGURE 5

## LEGEND

- PHASE 1
- PHASE 2
- PHASE 3
- PHASE 4





**Response to Appeal A2.1:** This comment introduces the appeal letter, and states that the commenter is writing on behalf of the City of Perris. This comment presents an objection to the City of Menifee's (Menifee) Planning Commission for the decision to approve the Mitigated Negative Declaration (MND) for Plot No. PLN21-0290. The commenter requests that this letter, in addition to the commenter's two previous letters, be included in the record of proceedings for the project and MND. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal A2.2:** This comment notes that there were several deficiencies in the February 2023 Initial Study (IS) environmental analysis, which were identified by a team of professionals that include City of Perris staff, as well as a consultant under contract with the City of Perris. The comment provides an introduction of each team member that reviewed the IS/MND. The comment notes that persons identified provided comment for the original March 20, 2023, appeal letter, as well as this supplemental letter. The comment states that the comment letter provides expert opinion supported by credible facts, and therefore, raises fair argument supported with substantial evidence that the project may have one or more significant impacts on the environment.

Comments provided by the commenter have been responded to individually below by CEQA experts and qualified professionals (resumes provided in Attachment C herein). This comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal A2.3:** The comment states that the Staff Report prepared for the City of Menifee May 3, 2023, City Council hearing was posted late, on Friday, April 28, 2023, after 4:00 p.m. The commenter reiterates their position presented within the original March 20, 2023, appeal letter that the IS/MND has serious flaws and does not meet the requirements pursuant to the CEQA Guidelines (14 CCR 15000, et seq.). The commenter provides introduction to the following comments of the comment letter. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Response to Appeal A2.4:** This comment summarizes that the March 20, 2023, appeal letter states the project description is inadequate in addressing whether the two warehouses may foreseeably be used for cold storage. The commenter states that the project included a Condition of Approval (4a) that defers environmental analysis of the environmental impacts associated with the warehouse. The comment includes the text of the condition.

The Section 3.4, Operational Characteristics, of the project description has been revised to include the following:

The Project would be operated as an industrial two-unit warehouse. Typical operational characteristics include employees and customers traveling to and from the site, delivery of materials and supplies to the site, truck loading and unloading, and manufacturing activities. The Project is anticipated to operate 7 days a week 24 hours a day. The Project would not include cold storage or operation Transport Refrigeration Units (TRUs).

The comment does not contain any additional information requiring changes to the MND. No further response is warranted.

**Response to Appeal A2.5:** The commenter states that Condition of Approval (4a), which prohibits the project's use for cold storage and Transport Refrigeration Units (TRUs) without the preparation of additional environmental analysis, concedes that the use of the proposed warehouse for cold storage is reasonably foreseeable. Further, the comment asserts that the City of Menifee has stated the use of the proposed project for cold storage may cause a reasonably foreseeable significant impact related to air quality and greenhouse gas (GHG) emissions subject to the annual 3,000 metric tons of CO<sub>2e</sub> threshold. The commenter



states that Condition (4a) attempts to mitigate impacts associated with cold storage and fails to comply with requirements for mitigation measures as included in CEQA Guidelines, Section 15126.4, including subsection (a)(1)(B). The commenter indicates that the IS/MND must be revised to disclose the potentially significant impact and mitigation measures to reduce or avoid impacts, and therefore, must recirculate the CEQA document pursuant to CEQA Guidelines, Section 15073.5(a) and (b).

The commenter erroneously assumes that Condition of Approval (4a) insinuates that the use of the proposed warehouse for cold storage is reasonably foreseeable. Condition of Approval (4a) has been included to ensure that future tenants of the proposed speculative industrial building operate within the parameters of the project that is proposed and analyzed within the CEQA document that was prepared. The applicant has not proposed refrigerated use or operation of TRUs as part of the project and has indicated no intent or need for such in the future. CEQA Guidelines, Section 15126.4 indicates that the document “shall describe feasible measures which could minimize significant adverse impacts” and subsection (a)(1)(B) states, “Where several measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified. Formulation of mitigation measures shall not be deferred until some future time.” As included in Section 5.8 of the IS/MND, the project would result in less than significant impact on GHG. Therefore, the project would not result in significant impacts that would warrant mitigation, and applicable requirements would not necessitate the inclusion of GHG mitigation or recirculation of the IS/MND. No further response is warranted.

**Response to Appeal A2.6:** The commenter notes that the analysis on pages 121-125 regarding the project’s consistency with the California Air Resources Board’s (“CARB”) Scoping Plan adopted in 2017 is out of date since CARB adopted a new scoping plan (2022 Scoping Plan) on December 15, 2022. The commenter concludes that the IS/MND’s analysis of whether the project conflicts with a Plan adopted to reduce GHG emissions is legally inadequate.

It is important to note that the 2022 Scoping Plan builds on the 2017 Scoping Plan as well as the requirements set forth by AB 1279, which directs the state to become carbon neutral no later than 2045. To achieve this statutory objective, the 2022 Scoping Plan lays out how California can reduce GHG emissions by 85% below 1990 levels and achieve carbon neutrality by 2045. The Scoping Plan scenario to do this is to “deploy a broad portfolio of existing and emerging fossil fuel alternatives and clean technologies, and align with statutes, Executive Orders, Board direction, and direction from the governor.” The 2022 Scoping Plan sets one of the most aggressive approaches to reach carbon neutrality in the world. The project would not impede the State’s progress towards carbon neutrality by 2045 under the 2022 Scoping Plan. The project would be required to comply with applicable current and future regulatory requirements promulgated through the 2022 Scoping Plan. Some of the current transportation sector policies the project will comply with (through vehicle manufacturer compliance) include: Advanced Clean Cars II, Advanced Clean Trucks, Advanced Clean Fleets, Zero Emission Forklifts, the Off-Road Zero- Emission Targeted Manufacturer rule, Clean Off-Road Fleet Recognition Program, Inuse Off-Road Diesel-Fueled Fleets Regulation, Off-Road Zero-Emission Targeted Manufacturer rule, Clean Off-Road Fleet Recognition Program, Amendments to the Inuse Off-Road Diesel-Fueled Fleets Regulation, carbon pricing through the Cap-and-Trade Program, and the Low Carbon Fuel Standard. As such, the project would not be inconsistent with the 2022 Scoping Plan. No further response is warranted.

**Response to Appeal A2.7:** This comment states that on page 148 of the IS/MND, construction analysis application of the Federal Transportation Administration (“FTA”) 80 dBA LEQ daytime construction noise threshold runs counter to the holding in *King & Gardiner Farms, LLC v. County of Kern* (2020) 45 Cal.App.5th 814, which held that the County of Kern’s use of an absolute noise threshold to analyze both construction and operational noise impacts failed to comply with CEQA.



The revised noise analysis has been prepared to analyze the nearest noise sensitive residential land uses within the Green Valley Specific Plan (GVSP) was prepared by Urban Crossroads in Attachment A herein. In addition, the updated noise analysis was revised consistent with the City of Perris CEQA thresholds of significance for construction noise analysis. This includes the City of Perris Municipal Code, Section 7.34.060, that identifies the City's construction noise standards and permitted hours of construction activity of 7:00 a.m. to 7:00 p.m. on any day except Sundays and legal holidays (with the exception of Columbus Day and Washington's birthday). The City of Perris Municipal Code, Section 7.34.060, noise level standard of 80 dBA Lmax applies to residential zones within the City of Perris. Based on the updated noise analysis (see Chapter 2, Response to Comments, Attachment A) substantial evidence substantiates that the project would result in a less than significant construction noise impact within the City of Perris. Therefore, the project would not result in any significant impacts and preparation of an EIR is not warranted. Likewise, recirculation of the IS/MND is not required. No further response is warranted.

**Response to Appeal A2.8:** This comment states that the noise study in the IS/MND needs to be revised in order to adequately identify and mitigate noise impacts from the project resulting from construction and operation due to proximity of the project site to approved residential development in the GVSP.

In response to this comment, the noise study has been revised to include the nearest future noise sensitive residential receivers in the GVSP. In addition, the noise study has been revised to include the City of Perris municipal code noise criteria. Pages 147 to 155 of Section 13, Noise, of the IS/MND, indicated the project would result in a less than significant impact on noise. Based on the revisions made, which include the City of Perris noise thresholds, as well as modeling to include the nearest areas zoned for sensitive residential receptors (197 feet north of the project boundary) within the City of Perris GVSP, the project would still result in less than significant construction and operational noise impacts (see Chapter 2, Response to Comments, Attachment A). Therefore, the project would result in less than significant impacts. The City of Perris does provide any facts, evidence, or analyses substantiating that a significant noise impact may occur; therefore, none of the noise related comments constitute substantial evidence of a fair argument that the project may result in significant noise impacts requiring the preparation of an EIR. An EIR is not warranted, and no revisions to the IS/MND resulting in new impacts requiring the recirculation of the IS/MND. No further response is warranted.

**Response to Appeal A2.9:** This comment states that the IS/MND's noise analysis has identified six sensitive receptor locations, the closest of which (R4) is over 1,000 feet from the Project site's boundary. The commenter indicates that the City of Menifee claims in Response to Appeal 32 (response to City of Perris letter dated March 20, 2023), that the noise analysis assumed sensitive receptors were located within 374 feet of the project site and makes reference to noise analysis included in an Attachment A; however, the attachment was not included. The commenter concludes that the City of Menifee needs to analyze whether the project will have noise impacts to the future residents of these reasonably foreseeable multi-family residential units identified in the GVSP.

As stated above in Response to Appeal A2.8, the Noise Impact Assessment was updated to include future sensitive residential receptors planned 197 feet north of the project as requested by the City of Perris. Based on the revisions made, which include the City of Perris noise thresholds, as well as modeling to include the nearest planned sensitive residential receptors (197 feet north of the project boundary) within the City of Perris GVSP, the project would still result in less than significant construction and operational noise impacts (see Chapter 2, Response to Comments, Attachment A). As such, the preparation of an EIR is not required. No further response is warranted.

**Response to Appeal A2.10:** The comment asserts that the City of Perris has set forth a fair argument that the project will result in significant traffic safety impacts due to the introduction of heavy truck traffic to the



intersection of Barnett Road and Ethanac Road causing the intersection to not function in a safe manner due to the existing confound and staggered configuration of the intersection of Barnett Road and Case Road at Ethanac Road. The comment notes that there is insufficient distance for trucks to make a lane change in order to turn left at Barnett Road, the left turn pocket provides limited stacking for trailer trucks to make a safe left turn, and slow moving trucks will cause congestion that could result in vehicular collisions. The comment includes the text of Response to Appeal 33 and states the City of Perris has presented substantial evidence in the form of expert opinion that a significant safety impact may occur as a result of the project.

First, the mere presence of conflicting opinions from purported experts is not enough to require preparation of an EIR. To constitute substantial evidence of a fair argument of a significant impact, an expert opinion must amount to more than unsubstantiated speculation by providing evidence of why a significant impact may occur. This comment is speculative and represents unsubstantiated opinion, as the commenter has not provided any evidence or an analysis of weaving in the segment of Ethanac Road in question nor have they provided any other evidence to demonstrate that the alleged deficiency actually exists and that the project substantially increases hazards at a dangerous intersection. The westbound left-turn pocket at Barnett Road is approximately 55 feet, which accommodates two passenger cars or a smaller truck. The signal timing accounts for the length of the turn pocket as the signal timing for westbound left-turn movements allows sufficient time for vehicles that enter the east leg of the intersection to also clear the west leg, thereby minimizing the possibility of westbound left-turning vehicles stacking into the intersection. As substantiated in the project-specific TIA and IS/MND, because there is adequate clearance time, the keep clear areas, the clear visibility in the intersection and the intersection configuration itself, the potential for vehicles to be stacked in the intersection is negligible. Furthermore, even if an 85-foot tractor trailer was to be in the left-turn pocket, there is still adequate room for vehicles utilizing both southbound left-turn lanes to traverse the intersection without being blocked by a truck. Furthermore, a pattern of safety hazards due to the design of the intersection has not been established at the intersection. A review of the Transportation Injury Mapping System (TIMS) indicates five collisions in the last 5 years along Ethanac Road at Barnett Road-Case Road. TIMS data is provided in Attachment D. The accidents did not include any fatalities and were caused by the following factors:

- Rear-end (2 accident)
- Broadside involving right-of-way violation (1 accident)
- Vehicle hit pedestrian (2 accidents)

Therefore, this comment does not present substantial evidence of a fair argument that the intersection is dangerous or that the project would substantially increase hazardous conditions at this intersection.

This comment also includes the text of the City of Menifee's Response to Appeal Comment 33 and reiterates that the City of Perris has presented substantial evidence in the form of expert opinion that a significant safety impact may occur as a result of the project. The City of Menifee prepared a traffic study for the project through certified traffic engineers, reviewed and approved by the City's Public Works Department, and while the City of Perris's commenters have an understanding of traffic engineering, a fair argument must amount to more than unsubstantiated conjecture by providing evidence of why a significant impact may occur. These opinions do not prove that a dangerous intersection exists nor explain how the project features and mitigation measures would be inadequate and would substantially increase hazards at a dangerous intersection. The comments provided do not rise to the level of expert opinion. The technical studies incorporated into the IS/MND, and the responses to these comments, were prepared by subject area experts who have provided responses based on technical analyses, which have been reviewed and approved by the City of Menifee as the Lead Agency (see Attachment C, Preparer Resumes). The information provided by the City of Perris does not contain substantial evidence such as traffic counts, modeling, data, or proof of



firsthand knowledge that refutes the data presented in the IS/MND. Therefore, no changes need to be made to the IS/MND and the preparation of an EIR is not required. No further response is warranted.

**Response to Appeal A2.11:** This comment states that the City of Perris has established substantial evidence that there is a direct nexus between the project and the need for realignment of Barnett Road south of Ethanac Road to align with Case Road at ultimate design. The comment asserts that completion of the realigned Barnett Road at Ethanac Road, to align with Case Road, is required to mitigate the traffic delays and impacts and safety hazards associated with generated trailer trucks and autos traffic of the project. The comment states that the payment of fair share costs would not address the impacts due to inadequate spacing between the interchange off ramp to the intersection of Case Road and Barnett Road at Ethanac Road. Additionally, the comment states that length of the existing left turn pocket on Ethanac Road at Barnett Road is only 50 feet, which is smaller than the minimum length of a trailer truck is 72 to 80 feet, which is inadequate to accommodate a truck trailer. Additionally, the comment states that the left turn pocket on Ethanac Road at Case Road is about 100 feet, which would again be barely enough space for one trailer truck. The commenter closes the comment by stating that the project would result in delays and significant safety concerns for Barnett Road, Case Road, Ethanac Road and the I-215 interchange.

The LOS analysis provided on page 164 of the Public Review Draft MND under Section 17, Transportation, Threshold a) is informational only and does not substantiate a significant transportation impact under CEQA pursuant to Public Resources Code (PRC) § 21099(b)(2), which states that automobile delay, as described solely by LOS or similar measure of traffic congestion, is no longer considered a significant impact under CEQA. The information provided in the IS/MND document was incorporated upon request by the City to summarize analysis from the Traffic Impact Analysis (Appendix N) and disclose it as part of the CEQA process. Therefore, the project shall not incorporate mitigation to address congestion or LOS impacts pursuant to PRC § 21099(b)(2).

Further, the assertion that there is a direct nexus between the project and the need for realignment of Barnett Road south of Ethanac Road is speculative, as the comment does not include evidence to establish such a nexus. This assertion is refuted by the analysis provided in the TIA, which shows that the intersection would operate at acceptable LOS with implementation of the mitigation measure identified in the TIA. Furthermore, a pattern of safety hazards has not been established at the intersection. A review of the TIMS indicates only one collision in the last 5 years along Ethanac Road at Barnett Road-Case Road (see Appendix D herein). The accident was caused by one party traveling in the wrong direction and not by the location or design of the roadway. Therefore, this comment does not present substantial evidence of a fair argument that the project would result in hazardous conditions at this intersection. As noted above in Response to Appeal A2.10, the westbound left-turn pocket at Barnett Road is approximately 55 feet, which would accommodate two passenger cars or a smaller truck. However, the signal timing for westbound left-turn movements allows for vehicles that enter the east leg of the intersection to also clear the west leg, thereby minimizing the possibility of westbound left-turning vehicles stacking into the intersection. Because there is adequate clearance time, the keep clear areas, the clear visibility in the intersection and the intersection configuration, the potential for vehicles to be stacked in the intersection is negligible. Therefore, no changes would need to be made to the IS/MND and the preparation of an EIR is not required. No further response is warranted.

**Response to Appeal A2.12:** This comment references the *Anderson First Coalition v. City of Anderson (2005)* case and states that the City of Menifee requirement for fair share costs towards future improvements at Ethanac and Barnett Road intersection does not constitute as adequate mitigation. The commenter asserts that the contributions must be sufficiently tied to the actual mitigation of traffic impacts at issue and therefore, an EIR must be prepared.



The LOS analysis provided on page 164 of the Public Review Draft MND under Section 17, Transportation, Threshold a) is informational only and does not substantiate a significant impact under CEQA pursuant to PRC § 21099(b)(2), which states that automobile delay, as described solely by LOS or similar measure of traffic congestion, is no longer considered a significant impact under CEQA. The information provided in the IS/MND document was incorporated by the City Menifee to summarize analysis from the Traffic Impact Analysis (IS/MND Appendix N) and disclose for informational purposes as part of the CEQA process. As discussed throughout IS/MND Section 17, Transportation, pages 162 to 168, the project would not result in a potentially significant impact on transportation and would not require mitigation to reduce potentially significant impacts.

To further clarify this point, the following text revision was made to Section 17, Transportation, Threshold a) on page 164 of the Public Review Draft MND:

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

(pg. 164)

As seen in Table T-3, all intersections anticipated to experience unsatisfactory LOS would improve to a satisfactory LOS with implementation of the proposed improvements. It should be noted that the ultimate planned configuration of Ethanac Road is that of a six-lane roadway. The roadway expansion would help reduce the delay experienced at the intersections of I-215 SB Ramps/NB Ramps and Ethanac Road. The LOS analysis provided is informational only and does not substantiate a significant impact under CEQA pursuant to Public Resources Code (PRC) § 21099(b)(2), which states that automobile delay, as described solely by LOS or similar measure of traffic congestion, is no longer considered a significant impact under CEQA. The information provided in this document has been incorporated upon request by the City to summarize analysis from the Traffic Impact Analysis (Appendix N) and disclose it as part of the CEQA process.

Therefore, the project would not result in significant impacts that would warrant mitigation, and applicable requirements would not necessitate the inclusion of Transportation mitigation or preparation of an EIR. Furthermore, the IS/MND found that the project would have a less than significant impact related to Transportation threshold c and that it will not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections). No further response is warranted.

**Response to Appeal A2.13:** This comment states that in light of deficiencies in the project's IS/MND as explored above the City of Perris asks that the Menifee City council reverses its decision and denies the proposed plan. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**Additional Air Quality, Greenhouse Gas Emissions (GHG), and Health Risk Assessment (HRA) Modeling**

The City of Perris submitted a comment letter (Appeal 1 Letter) on March 20, 2023. The City of Menifee prepared responses to those comments in Appeal Letter 3 above in March. The City of Menifee, having sufficient time to complete the additional analysis requested by the City of Perris, now supplements those responses with additional analysis. A supplemental focused Air Quality, GHG, and Health Risk Assessment (HRA) memorandum was prepared by Urban Crossroads to analyze the project's potential air quality and GHG impacts residentially zoned areas and on future GVSP residential development 197 feet north of the proposed project, as requested by the City of Perris. The supplemental analysis is provided as Chapter 2,



Response to Comments, Attachment B herein. The conclusions of the supplemental analysis are consistent with the conclusions of the Draft IS/MND - less than significant construction and operational air quality, GHG and HRA impacts would occur.

#### *Localized Air Quality Impacts*

**Construction:** As shown in Attachment B, Table 1 identifies the localized impacts at the nearest receptor location in the vicinity of the Project. As shown in Table 1, emissions resulting from the Project construction will not exceed the numerical thresholds of significance established by the SCAQMD for any criteria pollutant. Thus, a less than significant impact would occur for localized Project-related construction-source emissions, and no mitigation is required.

**Operational:** Table 2 identifies the localized operational impacts at the nearest receptor location in the vicinity of the Project. As shown in Table 1, emissions resulting from the Project operation will not exceed the numerical localized thresholds of significance established by the SCAQMD for any criteria pollutant. Thus, a less than significant impact would occur for localized Project-related operational-source emissions and no mitigation is required.

Additionally, related to Emergency Diesel Fire Pumps, although the use of diesel fire pumps is unknown at this time, to underscore the negligible amount of emissions that would be generated, a supplemental model run was conducted assuming that the Project could require two 197 hp diesel fire water pump backup generator. For analytical purposes, it is anticipated that the diesel fire water pump generators would result in a maximum time of 0.5 hour per day and 26 hours per year for testing. The two diesel fire pumps would generate 0.31 pounds of VOCs, 0.87 pounds of NO<sub>x</sub>, 0.80 pounds of CO, 0.05 pounds of PM<sub>10</sub>, and 0.05 pounds of PM<sub>2.5</sub> emissions per day during peak conditions. Additionally, the two diesel fire pumps would generate 3.77 metric tons of CO<sub>2e</sub> annually. When added to the emissions totals presented in the Draft IS/MND, this negligible increase in emissions would not result in any change to the findings or conclusions related to air quality or greenhouse gas emissions. Appendix A of Attachment B (Ethanac and Barnett Focused LST and HRA Assessment) includes the modeled emissions from the emergency diesel fire pumps.

#### *Construction HRA Impacts*

The land use with the greatest potential exposure to Project construction-source DPM emissions is Location R8 which is located approximately 197 feet northwest of the Project site at the planned property line of the future multi-family residential land use within the GVSP. R8 is placed at the property line nearest the Project site. At the maximally exposed individual receptor (MEIR), the maximum incremental cancer risk attributable to Project construction-source DPM emissions is estimated at 1.90 in one million, which is less than the SCAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction activity. All other receptors during construction activity would experience less risk than what is identified for this location.

#### *Operational HRA Impacts*

**Residential Exposure Scenario:** The residential land use with the greatest potential exposure to Project operational-source DPM emissions is Location R8 which is located approximately 197 feet northwest of the Project site at the planned property line of the future multi-family residential land use within the Green Valley Specific Plan. R8 is placed at the property line nearest the Project site. At the MEIR, the maximum incremental cancer risk attributable to Project operational-source DPM emissions is estimated at 0.37 in one million, which is less than the SCAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable significance threshold of



1.0. Because all other modeled residential receptors are exposed to lesser concentrations and are located at a greater distance from the Project site than the MEIR analyzed herein, and TACs generally dissipates with distance from the source, all other residential receptors in the vicinity of the Project site would be exposed to less emissions and therefore less risk than the MEIR identified herein. As such, the Project will not cause a significant human health or cancer risk to nearby residences.

**Worker Exposure Scenario:** The worker receptor land use with the greatest potential exposure to Project operational-source DPM emissions is Location R9, which represents the potential worker receptor approximately 445 feet northeast of the Project site at the property line for the Circle K convenience store. At the maximally exposed individual worker (MEIW), the maximum incremental cancer risk impact is 0.06 in one million which is less than the SCAQMD's threshold of 10 in one million. Maximum non-cancer risks at this same location were estimated to be <0.01, which would not exceed the applicable significance threshold of 1.0. Because all other modeled worker receptors are located at a greater distance than the MEIW analyzed herein, and DPM dissipates with distance from the source, all other worker receptors in the vicinity of the Project would be exposed to less emissions and therefore less risk than the MEIW identified herein. As such, the Project will not cause a significant human health or cancer risk to adjacent workers.

#### *Combined Construction and Operational HRA Impacts*

The land use with the greatest potential increased cancer risk due to exposure to Project construction-source and operational-source DPM emissions is Location R8. At this location, the maximum incremental cancer risk attributable to Project construction and operational DPM source emissions is estimated at 2.08 in one million, which is less than the threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction and operational activity. All other receptors during construction and operational activity would experience less risk than what is identified for this location.

Therefore, the project would result in less than significant impacts and preparation of an EIR not be required.



# Attachment A: Updated Noise Analysis



**DATE:** May 19, 2023  
**TO:** Konnie Dobrev, EPD Solutions, Inc.  
**FROM:** Bill Lawson, Urban Crossroads, Inc.  
**JOB NO:** 14775-05 RTC

## ETHANAC AND BARNET NOISE STUDY RESPONSE TO COMMENTS

Urban Crossroads, Inc. is pleased to submit this Response to comments for the proposed Ethanac and Barnet Noise Study. This letter has been prepared in response to the noise comments from the March 20, 2023 and May 3, 2023 Aleshire & Wynder Appeal Letters.

**(March 20, 2023) Response to Appeal 32:** This comment states that the noise study in the IS/MND needs to be revised in order to adequately identify and mitigate noise impacts from the project resulting from construction and operation due to proximity of the project site to approved residential development in the GVSP. In response to this comment, the noise study has been revised to include the nearest future noise sensitive residential receivers in the GVSP. In addition, the noise study has been revised to include the City of Perris municipal code noise criteria.

**(May 3, 2023) Response to Appeal 1.7:** The revised noise analysis has been updated to include the nearest noise sensitive residential land uses within the GVSP. In addition, the updated noise analysis was revised consistent with the City of Perris CEQA thresholds of significance for construction noise analysis. This includes the City of Perris Municipal Code, Section 7.34.060, that identifies the City's construction noise standards and permitted hours of construction activity of 7:00 a.m. to 7:00 p.m. on any day except Sundays and legal holidays (with the exception of Columbus Day and Washington's birthday). The City of Perris Municipal Code, Section 7.34.060, noise level standard of 80 dBA  $L_{max}$  applies to residential zones within the City of Perris.









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# **Ethanac and Barnett Warehouse**

## **NOISE ANALYSIS**

### **CITY OF MENIFEE**

PREPARED BY:

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MAY 19, 2023







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## **LIST OF ABBREVIATED TERMS**

(1)	Reference
ADT	Average Daily Traffic
ANSI	American National Standards Institute
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dBA	A-weighted decibels
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
Hz	Hertz
INCE	Institute of Noise Control Engineering
$L_{eq}$	Equivalent continuous (average) sound level
$L_{max}$	Maximum level measured over the time interval
$L_{min}$	Minimum level measured over the time interval
OPR	Office of Planning and Research
PPV	Peak particle velocity
Project	Ethanac and Barnett Warehouse
REMEL	Reference Energy Mean Emission Level
RMS	Root-mean-square
VdB	Vibration Decibels



## EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to determine the potential noise impacts and the necessary noise mitigation measures, if any, for the proposed Ethanac and Barnett Warehouse development ("Project"). The Project is proposed to consist of two industrial buildings totaling 251,912-square-feet (sf). This analysis assumes up to 25,191-sf manufacturing use (10% of the total industrial building sf) and 226,721-sf of warehouse use (90% of industrial building). This study has been prepared to satisfy applicable City of Menifee standards and thresholds of significance based on guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines (1).

The results of this Ethanac and Barnett Warehouse Noise Analysis are summarized below based on the significance criteria in Section 4 of this report. Table ES-1 shows the findings of significance for each potential noise and/or vibration impact under CEQA before and after any required mitigation measures.

**TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS**

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Off-Site Traffic Noise	7	<i>Less Than Significant</i>	-
Operational Noise	9	<i>Less Than Significant</i>	-
Construction Noise	10	<i>Less Than Significant</i>	-
Nighttime Concrete Pour Noise		<i>Less Than Significant</i>	-
Construction Vibration		<i>Less Than Significant</i>	-



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# **1 INTRODUCTION**

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed Ethanac and Barnett Warehouse (“Project”). This noise study briefly describes the proposed Project, provides information regarding noise fundamentals, sets out the local regulatory setting, presents the study methods and procedures for transportation related CNEL traffic noise analysis, and evaluates the future exterior noise environment. In addition, this study includes an analysis of the potential Project-related long-term stationary-source operational noise and short-term construction noise and vibration impacts.

## **1.1 SITE LOCATION**

The proposed Ethanac and Barnett Warehouse site is located at the southwest corner of Barnett Road and Ethanac Road in the City of Menifee, as shown on Exhibit 1-A. The Project site is currently vacant. Existing land uses near the site consist mostly of vacant land to the west, east of the Project site with some nearby residential homes located southwest and southeast of the Project site. In addition, the City of Perris recently approved the Green Valley Specific Plan Amendment 2 which includes planned noise sensitive residential land use north of Project site and Ethanac Road. (2)

## **1.2 PROJECT DESCRIPTION**

The Project is proposed to consist of two industrial buildings totaling 251,912-square-feet (sf). This analysis assumes up to 25,191-sf manufacturing use (10% of the total industrial building sf) and 226,721-sf of warehouse use (90% of industrial building). A preliminary site plan for the proposed Project is shown on Exhibit 1-B. It is anticipated that the Project would be developed in a single phase with an anticipated Opening Year of 2024. At the time this noise analysis was prepared, the future tenants of the proposed Project were unknown. The on-site Project-related noise sources are expected to include: loading dock activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements. This noise analysis is intended to describe noise level impacts associated with the expected typical operational activities at the Project site. To present a conservative approach, this report assumes the Project will operate 24-hours daily for seven days per week.

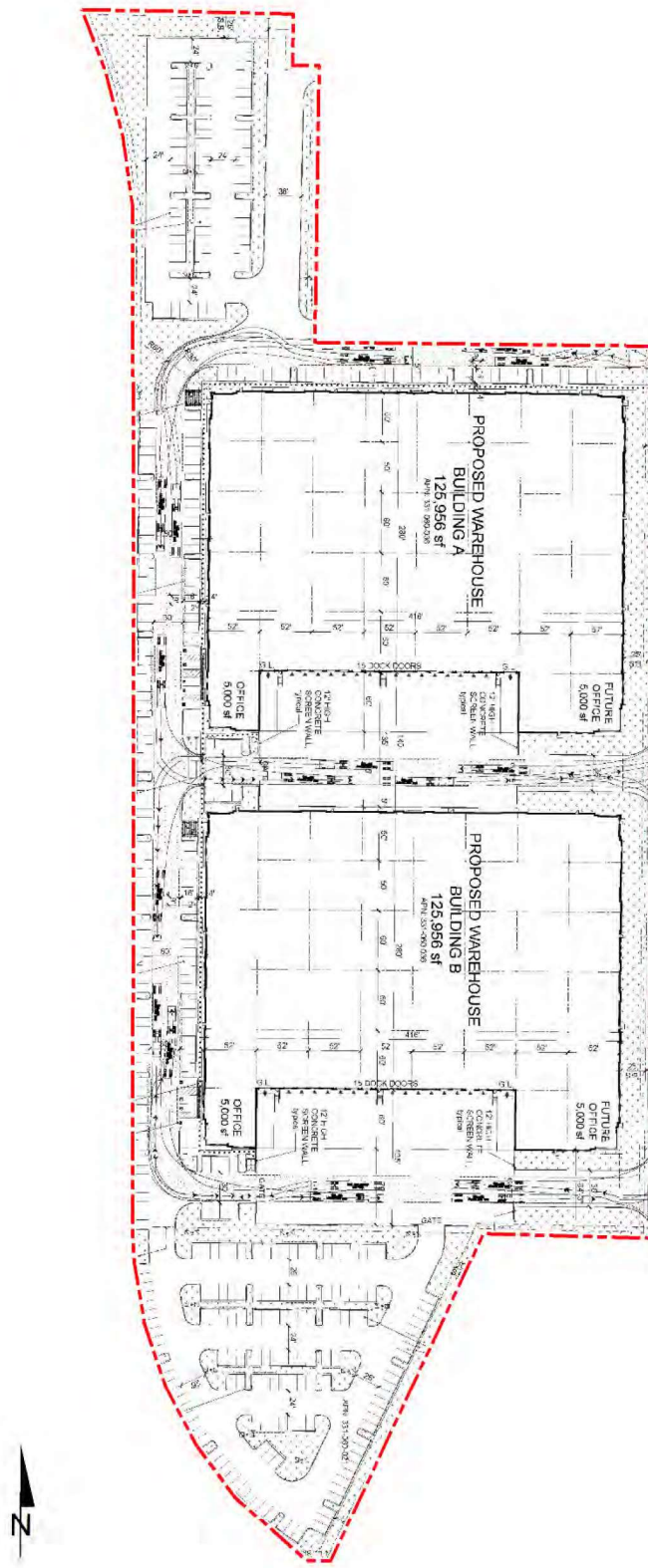


## EXHIBIT 1-A: LOCATION MAP





# EXHIBIT 1-B: SITE PLAN





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## 2 FUNDAMENTALS

Noise is simply defined as "unwanted sound." Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). A-weighted decibels (dBA) approximate the subjective response of the human ear to broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies which are audible to the human ear. Exhibit 2-A presents a summary of the typical noise levels and their subjective loudness and effects that are described in more detail below.

**EXHIBIT 2-A: TYPICAL NOISE LEVELS**

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE
THRESHOLD OF PAIN		140	INTOLERABLE OR DEAFENING	HEARING LOSS
NEAR JET ENGINE		130		
		120		
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110		
LOUD AUTO HORN		100	VERY NOISY	
GAS LAWN MOWER AT 1m (3 ft)		90		
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80		
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD	SPEECH INTERFERENCE
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60		
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	SLEEP DISTURBANCE
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		
QUIET SUBURBAN NIGHTTIME	LIBRARY	30	FAINT	NO EFFECT
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20		
	BROADCAST/RECORDING STUDIO	10	VERY FAINT	
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0		

Source: Environmental Protection Agency Office of Noise Abatement and Control, *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety* (EPA/ONAC 550/9-74-004) March 1974.

### 2.1 RANGE OF NOISE

Since the range of intensities that the human ear can detect is so large, the scale frequently used to measure intensity is a scale based on multiples of 10, the logarithmic scale. The scale for measuring intensity is the decibel scale. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. (2) The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA



at approximately 1,000 feet, which can cause serious discomfort (3). Another important aspect of noise is the duration of the sound and the way it is described and distributed in time.

## 2.2 NOISE DESCRIPTORS

Environmental noise descriptors are generally based on averages, rather than instantaneous, noise levels. The most used metric is the equivalent level ( $L_{eq}$ ). Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level ( $L_{eq}$ ) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period and is commonly used to describe the “average” noise levels within the environment.

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Community Noise Equivalent Level (CNEL), representing a composite 24-hour noise level is utilized. The CNEL is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time-of-day corrections require the addition of 5 decibels to dBA  $L_{eq}$  sound levels in the evening from 7:00 p.m. to 10:00 p.m., and the addition of 10 decibels to dBA  $L_{eq}$  sound levels at night between 10:00 p.m. and 7:00 a.m. These additions are made to account for the noise sensitive time periods during the evening and night hours when noise can become more intrusive. CNEL does not represent the actual sound level heard at any time, but rather represents the total sound exposure. The City of Menifee relies on the 24-hour CNEL level to assess land use compatibility with transportation related noise sources.

## 2.3 SOUND PROPAGATION

When sound propagates over a distance, it changes in level and frequency content. The way noise reduces with distance depends on the following factors.

### 2.3.1 GEOMETRIC SPREADING

Sound from a localized source (i.e., a stationary point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source. (2)

### 2.3.2 GROUND ABSORPTION

The propagation path of noise from a highway to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually



sufficiently accurate for distances of less than 200 ft. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (4)

### **2.3.3 ATMOSPHERIC EFFECTS**

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects. (2)

### **2.3.4 SHIELDING**

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Shielding by trees and other such vegetation typically only has an “out of sight, out of mind” effect. That is, the perception of noise impact tends to decrease when vegetation blocks the line-of-sight to nearby residents. However, for vegetation to provide a substantial, or even noticeable, noise reduction, the vegetation area must be at least 15 feet in height, 100 feet wide and dense enough to completely obstruct the line-of-sight between the source and the receiver. This size of vegetation may provide up to 5 dBA of noise reduction. The Federal Highway Administration (FHWA) does not consider the planting of vegetation to be a noise abatement measure. (5)

## **2.4 NOISE CONTROL**

Noise control is the process of obtaining an acceptable noise environment for an observation point or receiver by controlling the noise source, transmission path, receiver, or all three. This concept is known as the source-path-receiver concept. In general, noise control measures can be applied to these three elements.

## **2.5 NOISE BARRIER ATTENUATION**

Effective noise barriers can reduce noise levels by 10 to 15 dBA, cutting the loudness of traffic noise in half. A noise barrier is most effective when placed close to the noise source or receiver. Noise barriers, however, do have limitations. For a noise barrier to work, it must block the line-of-sight path of sound from the noise source.



## 2.6 LAND USE COMPATIBILITY WITH NOISE

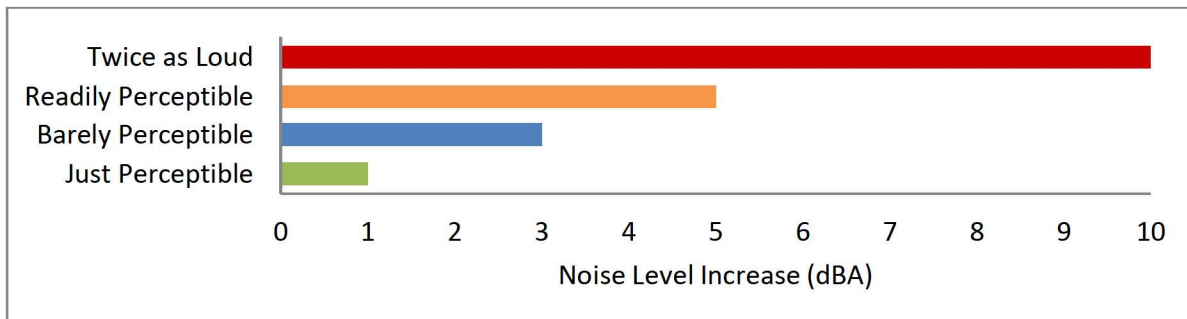
Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are more sensitive to noise intrusion than are commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop and work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process. The FHWA encourages State and Local government to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized. (6)

## 2.7 COMMUNITY RESPONSE TO NOISE

Approximately sixteen percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints may occur. Twenty to thirty percent of the population will not complain even in very severe noise environments. (7 pp. 8-6) Thus, a variety of reactions can be expected from people exposed to any given noise environment.

Surveys have shown that community response to noise varies from no reaction to vigorous action for newly introduced noises averaging from 10 dB below existing to 25 dB above existing. (8) According to research originally published in the Noise Effects Handbook (7), the percentage of high annoyance ranges from approximately 0 percent at 45 dB or less, 10 percent are highly annoyed around 60 dB, and increases rapidly to approximately 70 percent being highly annoyed at approximately 85 dB or greater. Despite this variability in behavior on an individual level, the population can be expected to exhibit the following responses to changes in noise levels as shown on Exhibit 2-B. A change of 3 dBA is considered barely perceptible, and changes of 5 dBA are considered readily perceptible. (4)

**EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION**





## 2.8 VIBRATION

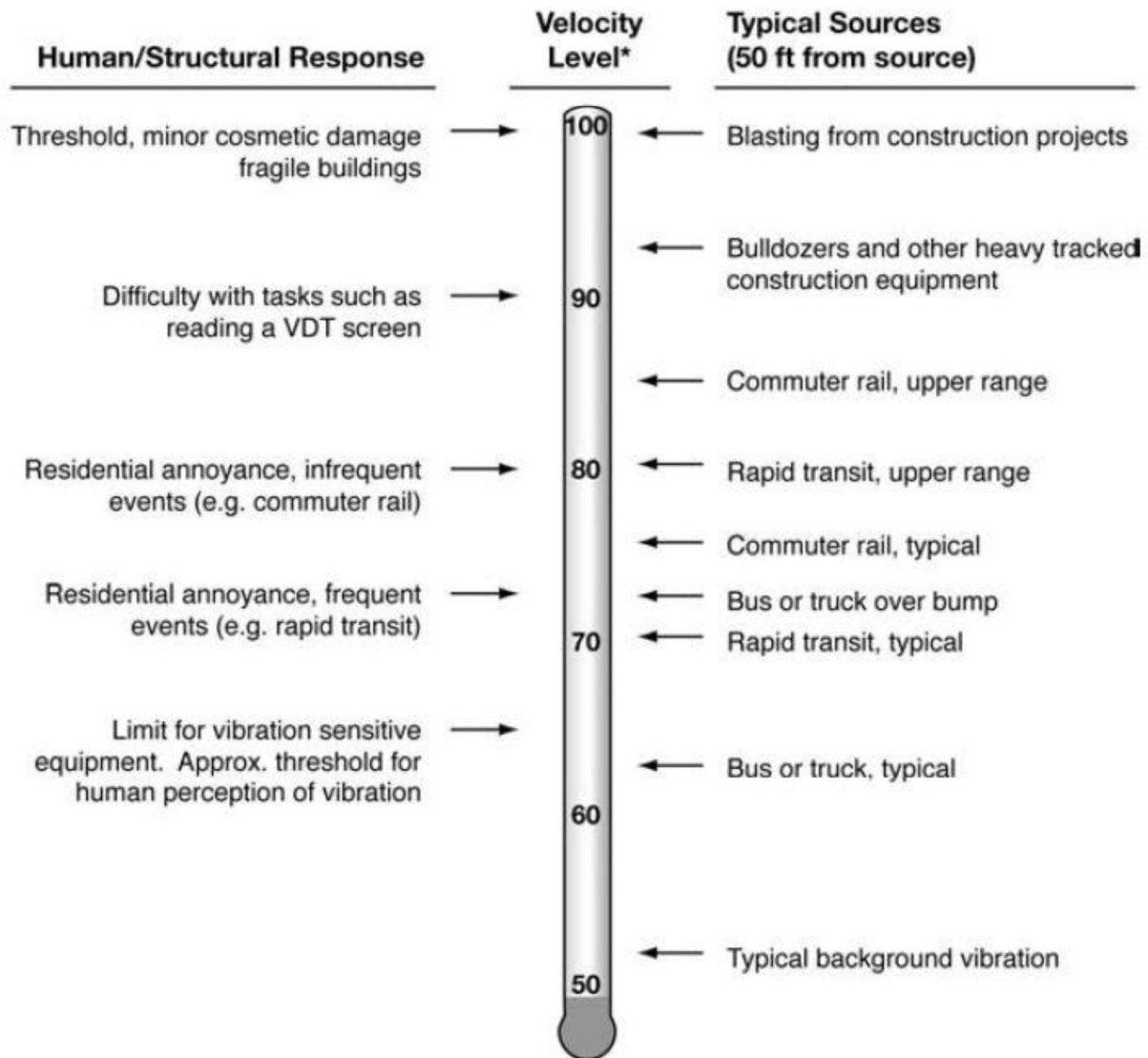
Per the Federal Transit Administration (FTA) *Transit Noise Impact and Vibration Impact Assessment Manual* (8), vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings but is not always suitable for evaluating human response (annoyance) because it takes some time for the human body to respond to vibration signals. Instead, the human body responds to average vibration amplitude often described as the root mean square (RMS). The RMS amplitude is defined as the average of the squared amplitude of the signal and is most frequently used to describe the effect of vibration on the human body. Decibel notation (VdB) is commonly used to measure RMS. Decibel notation (VdB) serves to reduce the range of numbers used to describe human response to vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receivers for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration-sensitive equipment and/or activities.

The background vibration-velocity level in residential areas is generally 50 VdB. Ground-borne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. Exhibit 2-C illustrates common vibration sources and the human and structural response to ground-borne vibration.



EXHIBIT 2-C: TYPICAL LEVELS OF GROUND-BORNE VIBRATION



\* RMS Vibration Velocity Level in VdB relative to  $10^{-6}$  inches/second

Source: Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual.



### 3 REGULATORY SETTING

The federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. In most areas, automobile and truck traffic is the major source of environmental noise. Traffic activity generally produces an average sound level that remains constant with time. Air and rail traffic, and commercial and industrial activities are also major sources of noise in some areas. Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies.

#### 3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared per guidelines adopted by the Governor's Office of Planning and Research (OPR). (9) The purpose of the Noise Element is to *limit the exposure of the community to excessive noise levels*. In addition, the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts.

#### 3.2 CITY OF MENIFEE GENERAL PLAN NOISE ELEMENT

The City of Menifee has adopted a Noise Element of the General Plan to control and abate environmental noise, and to protect the citizens of City of Menifee from excessive exposure to noise (10). The Noise Element specifies the maximum allowable unmitigated exterior noise levels for new developments impacted by transportation noise sources such as arterial roads, freeways, airports and railroads. In addition, the Noise Element identifies several policies to minimize the impacts of excessive noise levels throughout the community and establishes noise level requirements for all land uses. To protect City of Menifee residents from excessive noise, the Noise Element contains the following goal related to the Project:

*N-1 Noise-sensitive land uses are protected from excessive noise and vibration exposure.*

The noise policies specified in the City of Menifee Noise Element provide the guidelines necessary to satisfy this goal. Policy N-1.2 states that new developments are required to *comply with the noise standards of local, regional, and state building code regulations, including but not limited to the city's Municipal Code, Title 24 of the California Code of Regulations, the California Green Building Code, and subdivision and development codes*. In addition, the Noise Element provides Policy N-1.11 to *discourage the siting of noise-sensitive uses in areas in excess of 65 dBA CNEL without appropriate mitigation* (10).

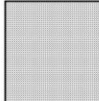


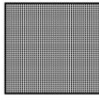
### 3.2.1 LAND USE COMPATIBILITY

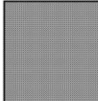
The noise criteria identified in the City of Menifee Noise Element are guidelines to evaluate the land use compatibility of transportation related noise. The compatibility criteria, shown on Exhibit 3-A, provides the city with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels. Per the City's *Noise Element Background Document and Definitions*, *Land Use Compatibility for Community Noise Environments* (Table N-b3), non-noise sensitive land use is considered *normally acceptable* with noise levels up to 70 dBA CNEL. (10)


**EXHIBIT 3-A: LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENTS**

Land Uses	CNEL (dBA)					
	55	60	65	70	75	80
Residential-Low Density Single Family, Duplex, Mobile Homes						
Residential- Multiple Family						
Transient Lodging, Motels, Hotels						
Schools, Libraries, Churches, Hospitals, Nursing Homes						
Auditoriums, Concert Halls, Amphitheaters						
Sports Arena, Outdoor Spectator Sports						
Playgrounds, Neighborhood Parks						
Golf Courses, Riding Stables, Water Recreation, Cemeteries						
Office Buildings, Businesses, Commercial and Professional						
Industrial, Manufacturing, Utilities, Agricultural						

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

 **Conditionally Acceptable:**  
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and the needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

 **Normally Unacceptable:**  
New construction or development should generally be discouraged. If new construction does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

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

Source: California Office of Noise Control. Guidelines for the Preparation and Content of Noise Elements of the General Plan. February 1976.  
Adapted from the US EPA Office of Noise Abatement Control, Washington D.C. Community Noise. Prepared by Wyle Laboratories.  
December 1971.

Source: City of Menifee General Plan, Noise Background Document and Definitions, Table N-b3.



### 3.3 OPERATIONAL NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as Ethanac and Barnett Warehouse Project, stationary-source (operational) noise such as the expected loading dock activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements are typically evaluated against standards established under a jurisdiction's Development Code or General Plan. Although the Project site is located within the City of Menifee, noise-sensitive receivers potentially impacted by operational noise activities are also located in the City of Perris. Therefore, to accurately describe the potential Project-related operational noise level contributions, this analysis presents the appropriate operational noise standards for each jurisdiction adjacent to the Project site.

#### 3.4.1 CITY OF MENIFEE OPERATIONAL NOISE STANDARDS

The City of Menifee Development Code, Chapter 9.215 Noise Control Regulations, Section 9.215.060 Table 9.215.060-1 establishes the permissible noise level that may intrude into a neighbor's property. The Development Code establishes the exterior noise level criteria for noise-sensitive residential properties affected by stationary noise sources. For residential properties, the exterior noise level shall not exceed 65 dBA  $L_{eq}$  during daytime hours (7:00 a.m. to 10:00 p.m.) and shall not exceed 45 dBA  $L_{eq}$  during the nighttime hours (10:00 p.m. to 7:00 a.m.). (11) Since existing uses in the Project study area include non-residential, medical/hospital, and school uses, and the City of Menifee does not identify exterior noise level standards specific to these uses, the residential exterior noise level limits are applied to all noise-sensitive receiver locations in the Project study area. The City of Menifee operational noise level standards are shown on Table 3-1. The City of Menifee Development Code noise regulations are included in Appendix 3.1.

**TABLE 3-1: OPERATIONAL NOISE STANDARDS**

Jurisdiction	Land Use	Time Period	Noise Level Standard (dBA) <sup>1,2</sup>
City of Menifee	Residential	Daytime (7:01 a.m. - 10:00 p.m.)	65 dBA $L_{eq}$
		Nighttime (10:01 p.m. - 7:00 a.m.)	45 dBA $L_{eq}$

<sup>1</sup> City of Menifee Development Code, Section 9.215.060 (Appendix 3.1).

<sup>2</sup>  $L_{eq}$  represents a steady state sound level containing the same total energy as a time varying signal over a given period.

#### 3.4.2 CITY OF PERRIS OPERATIONAL NOISE STANDARDS

The City of Perris Municipal Code, Chapter 7.34 *Noise Control*, Section 7.34.040, establishes the permissible noise level at any point on the property line of the affected residential receivers. Therefore, for residential properties, the exterior noise level shall not exceed a maximum noise level of 80 dBA  $L_{max}$  during daytime hours (7:01 a.m. to 10:00 p.m.) and shall not exceed a maximum noise level of 60 dBA  $L_{max}$  during the nighttime hours (10:01 p.m. to 7:00 a.m.), as shown on Table 3-1. (11)



Table 3-2 shows the City of Perris Municipal Code standards used in this analysis to evaluate the potential operational noise levels from the Project. The City of Perris Municipal Code is included in Appendix 3.2.

**TABLE 3-2: OPERATIONAL NOISE STANDARDS**

Jurisdiction	Land Use	Time Period	Noise Level Standard (dBA) <sup>1,2</sup>
City of Perris	Residential <sup>1</sup>	Daytime (7:01 a.m. - 10:00 p.m.)	80 dBA L <sub>max</sub>
		Nighttime (10:01 p.m. - 7:00 a.m.)	60 dBA L <sub>max</sub>

<sup>1</sup> City of Perris Municipal Code, Sections 7.34.040 (Appendix 3.2).

<sup>2</sup> L<sub>max</sub> represents the maximum over a given period.

### 3.4 CONSTRUCTION NOISE STANDARDS

To analyze noise impacts originating from the construction of the Project, noise from construction activities is typically limited to the hours of operation established under a jurisdiction's Code. To accurately describe the potential Project-related construction noise level contributions to the existing noise environment, this analysis presents the appropriate construction noise standards for the City of Menifee, and the City of Perris.

#### 3.4.1 CITY OF MENIFEE CONSTRUCTION NOISE STANDARDS

To control noise impacts associated with the construction of the proposed Project, the City of Menifee has established limits to the hours of operation. Section 9.215.060(C) of the City's Development Code indicates that private construction projects, located within one-quarter of a mile from an occupied residence, are considered exempt from the Development Code noise standards if they occur within the permitted hours of 6:30 a.m. and 7:00 p.m., with no activity allowed on Sundays and nationally recognized holidays (11). However, neither the City of Menifee General Plan Noise Element or Development Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers, which would allow for a quantified determination of what CEQA constitutes a *substantial temporary or permanent increase in ambient noise levels*. Therefore, a numerical construction threshold based on Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* is used for analysis of daytime construction impacts, as discussed below.

According to the FTA, local noise ordinances are typically not very useful in evaluating construction noise. They usually relate to nuisance and hours of allowed activity, and sometimes specify limits in terms of maximum levels, but are generally not practical for assessing the impact of a construction project. Project construction noise criteria should account for the existing noise environment, the absolute noise levels during construction activities, the duration of the construction, and the adjacent land use. Due to the lack of standardized construction noise thresholds, the FTA provides guidelines that can be considered reasonable criteria for construction noise assessment. The FTA considers a daytime exterior construction noise level of 80 dBA L<sub>eq</sub> as a reasonable threshold for noise sensitive residential land use (8 p. 179).



### 3.4.2 CITY OF PERRIS CONSTRUCTION NOISE STANDARDS

The City of Perris Municipal Code, Section 7.34.060, identifies the City's construction noise standards and permitted hours of construction activity of 7:00 a.m. to 7:00 p.m. on any day except Sundays and legal holidays (with the exception of Columbus Day and Washington's birthday). The City of Perris Municipal Code, Section 7.34.060, noise level standard of 80 dBA  $L_{max}$  applies to residential zones within the City of Perris. (11)

### 3.5 VIBRATION STANDARDS

Construction activity can result in varying degrees of ground-borne vibration, depending on the equipment and methods used, distance to the affected structures and soil type. Construction vibration is generally associated with pile driving and rock blasting. Other construction equipment such as air compressors, light trucks, hydraulic loaders, etc., generates little or no ground vibration (8). To analyze vibration impacts originating from the operation and construction of the Ethanac and Barnett Warehouse, vibration-generating activities are appropriately evaluated against standards established under a City's Municipal Code, if such standards exist. However, the City of Menifee does not identify specific vibration level limits. Therefore, for analysis purposes, the Caltrans *Transportation and Construction Vibration Guidance Manual*, (12 p. 38) Table 19, vibration damage are used in this noise study to assess potential temporary construction-related impacts at adjacent building locations. The nearest noise sensitive buildings adjacent to the Project site can best be described as "older residential structures" with a maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec).

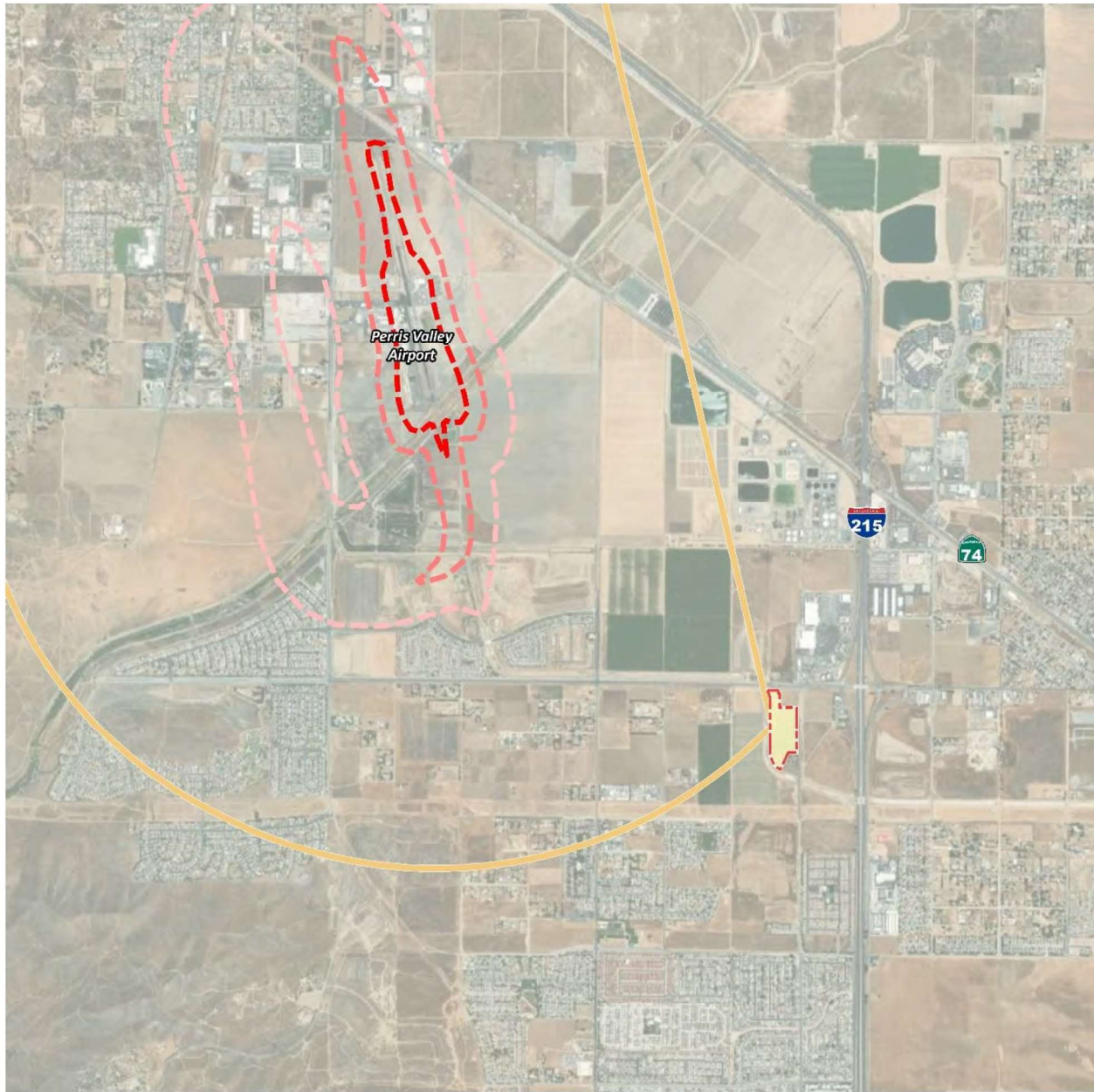
### 3.6 PERRIS VALLEY AIRPORT (PV)

The Perris Valley Airport (PV) is located approximately 1.6 miles southeast of the Project Site. This places the Project site outside the Perris Valley Airport Influence Area and is not subject to the *Riverside County Airport Land Use Compatibility Plan Policy Document* (RC ALUCP). The RC ALUCP outlines policies for determining the land use compatibility planning in the vicinity of airports throughout Riverside County. (13)

The noise contour boundaries used to determine the potential aircraft-related noise impacts at the Project site are found on Map PV-3 of the RC ALUCP. As shown on Exhibit 3-B, the Project site is located outside the 55 dBA CNEL noise level contour boundaries and is considered *clearly acceptable*. Therefore, based on the (RC ALUCP) compatibility criteria, *the activities associated with the specified land use can be carried out with essentially no interference from the noise exposure*.



### EXHIBIT 3-B: PERRIS VALLEY AIRPORT (PV) NOISE CONTOURS



#### LEGEND:

- Project Site Boundary
- 55 dBA CNEL Noise Contour
- 60 dBA CNEL Noise Contour
- 65 dBA CNEL Noise Contour

Source: Riverside County Airport Land Use  
Compatibility Plan Policy Document (July 2010)



## 4 SIGNIFICANCE CRITERIA

The following significance criteria are based on currently adopted guidance provided by Appendix G of the Guidelines for Implementation of the California Environmental Quality Act (CEQA) Guidelines. (1) For the purposes of this report, impacts would be potentially significant if the Project results in or causes:

- A. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
- B. Generation of excessive ground-borne vibration or ground-borne noise levels?
- C. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

### 4.1 NOISE LEVEL INCREASES (THRESHOLD A)

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines described above at the closest sensitive receiver locations. Under CEQA, consideration must be given to the magnitude of the increase, the existing baseline ambient noise levels, and the location of noise-sensitive receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes *that there is no single noise increase that renders the noise impact significant*. (14) This is primarily because of the wide variation in individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called *ambient* environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will typically be judged.

#### 4.1.1 NOISE-SENSITIVE RECEIVERS

The Federal Interagency Committee on Noise (FICON) (15) developed guidance to be used for the assessment of project-generated increases in noise levels that consider the ambient noise level. The FICON recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (CNEL) and equivalent continuous noise level ( $L_{eq}$ ).

As previously stated, the approach used in this noise study recognizes *that there is no single noise increase that renders the noise impact significant*, based on a 2008 California Court of Appeal ruling on Gray v. County of Madera. (14) For example, if the ambient noise environment is quiet (<60 dBA) and the new noise source greatly increases the noise levels, an impact may occur if the noise criteria may be exceeded. Therefore, for this analysis, a *readily perceptible* 5 dBA or greater project-related noise level increase is considered a significant impact when the without project



noise levels are below 60 dBA. Per the FICON, in areas where the without project noise levels range from 60 to 65 dBA, a 3 dBA *barely perceptible* noise level increase appears to be appropriate for most people. When the without project noise levels already exceed 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact if the noise criteria for a given land use is exceeded, since it likely contributes to an existing noise exposure exceedance. The FICON guidance provides an established source of criteria to assess the impacts of substantial temporary or permanent increase in baseline ambient noise levels. Based on the FICON criteria, the amount to which a given noise level increase is considered acceptable is reduced when the without Project (baseline) noise levels are already shown to exceed certain land-use specific exterior noise level criteria. The specific levels are based on typical responses to noise level increases of 5 dBA or *readily perceptible*, 3 dBA or *barely perceptible*, and 1.5 dBA depending on the underlying without Project noise levels for noise-sensitive uses. These levels of increases and their perceived acceptance are consistent with guidance provided by both the Federal Highway Administration (4 p. 9) and Caltrans (16 p. 2\_48).

#### 4.1.2 NON-NOISE-SENSITIVE RECEIVERS

The City of Menifee General Plan Noise Element, Table N-b3, *Land Use Compatibility for Community Noise Environments* was used to establish the satisfactory noise levels of significance for non-noise-sensitive land uses in the Project study area. As previously shown on Exhibit 3-A, the *normally acceptable* exterior noise level for non-noise-sensitive land uses is 70 dBA CNEL. (17) To determine if Project-related traffic noise level increases are significant at off-site non-noise-sensitive land uses, a *barely perceptible* 3 dBA criteria is used. When the without Project noise levels are greater than the *normally acceptable* 70 dBA CNEL land use compatibility criteria, a *barely perceptible* 3 dBA or greater noise level increase is considered a significant impact since the noise level criteria is already exceeded. The noise level increases used to determine significant impacts for non-noise-sensitive land uses is generally consistent with the FICON noise level increase thresholds for noise-sensitive land uses but instead rely on the City of Menifee General Plan Noise Element, Table N-b3, *Land Use Compatibility for Community Noise Environments normally acceptable* 70 dBA CNEL exterior noise level criteria.

## 4.2 VIBRATION (THRESHOLD B)

As described in Section 3.4, the vibration impacts originating from the construction of Ethanac and Barnett Warehouse, vibration-generating activities are appropriately evaluated using the Caltrans vibration damage thresholds to assess potential temporary construction-related impacts at adjacent building locations. The nearest noise sensitive buildings adjacent to the Project site can best be described as “older residential structures” with a maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec).



### 4.3 CEQA GUIDELINES NOT FURTHER ANALYZED (THRESHOLD C)

The closest airport which would require additional noise analysis under CEQA Appendix G Guideline C is the Perris Valley Airport located approximately 1.6 miles southeast of the Project site. As previously described in Section 3.6, the Project site is located outside the PV Airport Influence Area and the 55 dBA CNEL noise level contours. Therefore, the potential impacts under CEQA Appendix G Guideline C, are *less than significant* and are not further analyzed in this noise study.

### 4.4 SIGNIFICANCE CRITERIA SUMMARY

Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed development. Table 4-1 shows the significance criteria summary matrix that includes the allowable criteria used to identify potentially significant incremental noise level increases.

**TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY**

Analysis	Receiving Land Use	Jurisdiction	Condition(s)	Significance Criteria	
				Daytime	Nighttime
Off-Site	Noise-Sensitive <sup>1</sup>	All	If ambient is < 60 dBA Leq <sup>1</sup>	≥ 5 dBA Leq Project increase	
			If ambient is 60 - 65 dBA Leq <sup>1</sup>	≥ 3 dBA Leq Project increase	
			If ambient is > 65 dBA Leq <sup>1</sup>	≥ 1.5 dBA Leq Project increase	
	Non-Noise-Sensitive <sup>2</sup>	All	if ambient is > 70 dBA CNEL	≥ 3 dBA CNEL Project increase	
Operational	Noise-Sensitive <sup>1</sup>	City of Menifee	Exterior Noise Level Limit <sup>3</sup>	65 dBA Leq	45 dBA Leq
		City of Perris	Exterior Noise Level Limit <sup>4</sup>	80 dBA L <sub>max</sub>	60 dBA L <sub>max</sub>
		All	If ambient is < 60 dBA Leq <sup>1</sup>	≥ 5 dBA Leq Project increase	
			If ambient is 60 - 65 dBA Leq <sup>1</sup>	≥ 3 dBA Leq Project increase	
			If ambient is > 65 dBA Leq <sup>1</sup>	≥ 1.5 dBA Leq Project increase	
Construction	Noise-Sensitive <sup>1</sup>	City of Menifee	Noise Level Threshold <sup>5</sup>	80 dBA Leq	n/a
		City of Perris	Noise Level Threshold <sup>6</sup>	80 dBA L <sub>max</sub>	n/a
		All	Vibration Level Threshold <sup>7</sup>	0.3 PPV (in/sec)	

<sup>1</sup> FICON, 1992.

<sup>2</sup> City of Menifee General Plan Noise Element, Table N-b3.

<sup>3</sup> City of Menifee Development Code, Section 9.215.060 (Appendix 3.1).

<sup>4</sup> City of Perris Municipal Code, Sections 7.34.040 (Appendix 3.2).

<sup>5</sup> Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual.

<sup>6</sup> City of Perris Municipal Code, Section 7.34.060 (Appendix 3.2)

<sup>7</sup> Caltrans Transportation and Construction Vibration Manual, April 2020 Table 19.

"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.



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## 5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, 24-hour noise level measurements were taken at five locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Exhibit 5-A provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Wednesday, March 23<sup>th</sup>, 2022. Appendix 5.1 includes study area photos.

### 5.1 MEASUREMENT PROCEDURE AND CRITERIA

To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the equivalent daytime and nighttime hourly noise levels. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (18)

### 5.2 NOISE MEASUREMENT LOCATIONS

The long-term noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing ambient hourly noise levels surrounding the Project site. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent every part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that, *sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources.* (2) Further, FTA guidance states, *that it is not necessary nor recommended that existing noise exposure be determined by measuring at every noise-sensitive location in the project area. Rather, the recommended approach is to characterize the noise environment for clusters of sites based on measurements or estimates at representative locations in the community.* (8)

Based on recommendations of Caltrans and the FTA, it is not necessary to collect measurements at each individual building or residence, because each receiver measurement represents a group of buildings that share acoustical equivalence. (8) In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers represent a location of noise sensitive areas and are used to estimate the future noise level impacts. Collecting reference ambient noise level measurements at the nearby sensitive receiver locations allows for a comparison of the before and after Project noise levels



and is necessary to assess potential noise impacts due to the Project's contribution to the ambient noise levels.

### 5.3 NOISE MEASUREMENT RESULTS

The noise measurements presented below focus on the average or equivalent sound levels ( $L_{eq}$ ). The equivalent sound level ( $L_{eq}$ ) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 5-1 identifies the hourly daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise levels at each noise level measurement location.

**TABLE 5-1: 24-HOUR AMBIENT NOISE LEVEL MEASUREMENTS**

Location <sup>1</sup>	Description	Energy Average Noise Level (dBA $L_{eq}$ ) <sup>2</sup>	
		Daytime	Nighttime
L1	Located west of the Project site near single-family residence at 26038 Hull Street.	48.1	49.8
L2	Located southeast of the Project site near single-family residence at 26515 Alta Avenue.	61.7	59.9
L3	Located southeast of the Project site near single-family residence at 26635 Summer Sunshine Drive.	47.8	47.2
L4	Located southwest of the Project site near single-family residence at 26350 Starr Drive.	53.6	54.2
L5	Located west of the Project site near single-family residence at 26340 Corsica Lane.	51.6	53.8

<sup>1</sup> See Exhibit 5-A for the noise level measurement locations.

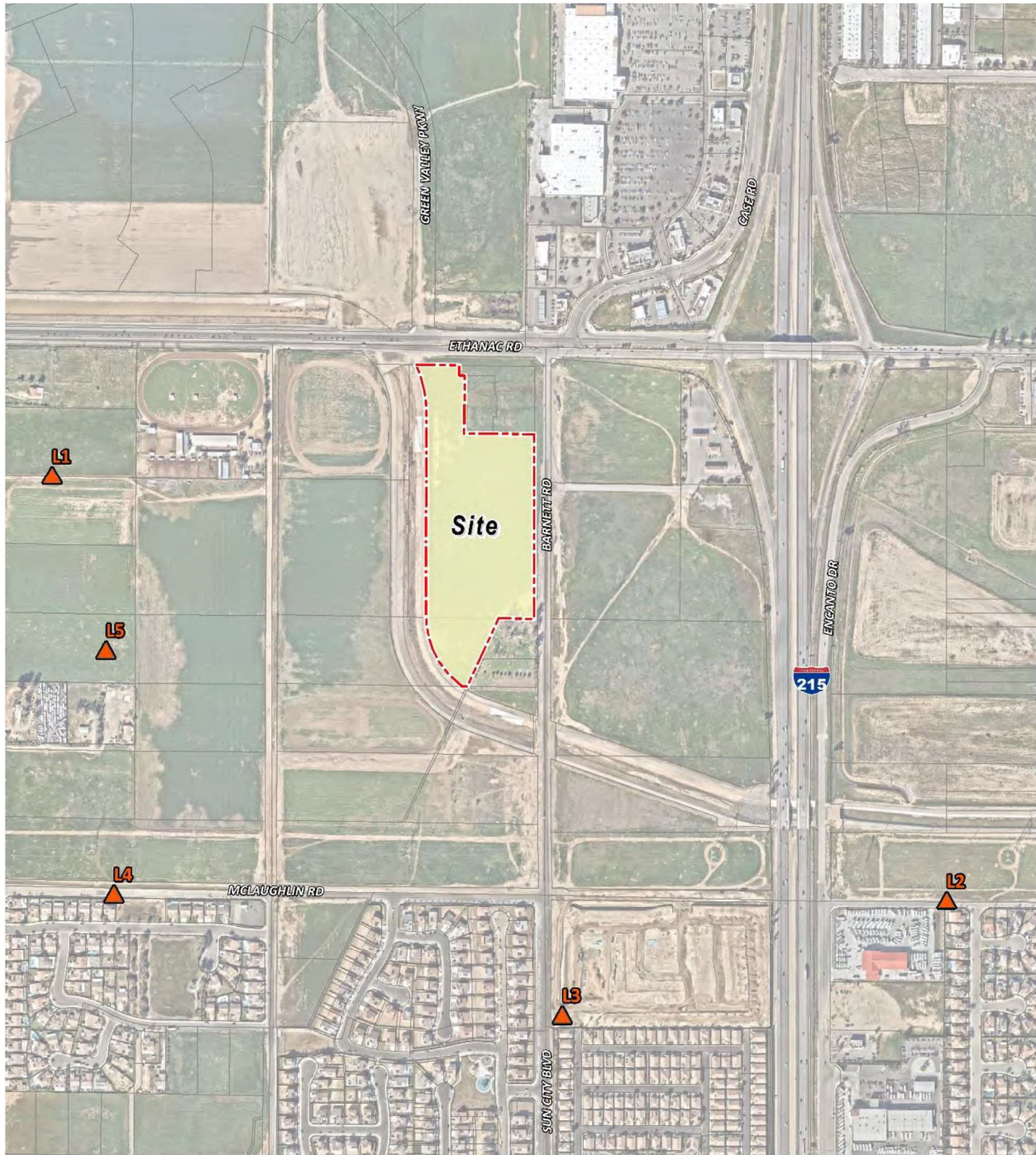
<sup>2</sup> Energy (logarithmic) average levels. The long-term 24-hour measurement worksheets are included in Appendix 5.2.

"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

Table 5-1 provides the equivalent noise levels used to describe the daytime, evening, and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 5.2 provides summary worksheets of the noise levels for each of the daytime and nighttime hours.



# EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS





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## 6 TRAFFIC NOISE METHODS AND PROCEDURES

The following section outlines the methods and procedures used to estimate and analyze the future traffic noise environment. Consistent with the City of Menifee *Land Use Compatibility for Community Noise Environments* (see Exhibit 3-A), all transportation related noise levels are presented in terms of the 24-hour CNEL's.

### 6.1 FHWA TRAFFIC NOISE PREDICTION MODEL

The expected roadway noise level increases from vehicular traffic were calculated by Urban Crossroads, Inc. using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108. (19) The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). In California the national REMELs are substituted with the California Vehicle Noise (Calveno) Emission Levels. (20) Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period. Research conducted by Caltrans has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used in this analysis. (21)

#### 6.1.1 OFF-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 6-1 presents the roadway parameters used to assess the Project's off-site transportation noise impacts. Table 6-1 identifies the seven off-site study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the City of Menifee General Plan Circulation Element, and the vehicle speeds. The ADT volumes used in this study area presented on Table 6-2 are based on *Ethanac and Barnett Warehouse Traffic Analysis*, prepared by EPD Solutions, Inc. (22)

- Existing Conditions
- Existing Conditions plus Project
- Opening Year Cumulative Without Project (2024) Conditions
- Opening Year Cumulative With Project (2024) Conditions

The ADT volumes vary for each roadway segment based on the existing traffic volumes and the combination of project traffic distributions. This analysis relies on a comparative evaluation of the off-site traffic noise impacts at the boundary of the right-of-way of the receiving adjacent land use, without and with project ADT traffic volumes from the Project traffic study.



**TABLE 6-1: OFF-SITE ROADWAY PARAMETERS**

ID	Roadway	Segment	Classification <sup>1</sup>	Receiving Land Use <sup>2</sup>	Distance from Centerline to Receiving Land Use (Feet) <sup>3</sup>	Vehicle Speed (mph)
1	Murrieta Rd.	n/o Ethanac Rd.	Secondary Arterial	Sensitive	50'	45
2	Murrieta Rd.	s/o Ethanac Rd.	Secondary Arterial	Sensitive	50'	45
3	Barnett Rd.	s/o Ethanac Rd.	Secondary Arterial	Non-Sensitive	50'	45
4	Ethanac Rd.	w/o Murrieta Rd.	Expressway	Sensitive	53'	55
5	Ethanac Rd.	e/o Murrieta Rd.	Expressway	Sensitive	53'	55
6	Ethanac Rd.	e/o Barnett Rd.	Expressway	Non-Sensitive	53'	55
7	Ethanac Rd.	e/o I-215 NB Ramps	Expressway	Non-Sensitive	53'	55

<sup>1</sup> City of Menifee General Plan Circulation Element.

<sup>2</sup> Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

<sup>3</sup> Distance to receiving land use is based upon the right-of-way distances.

To quantify the off-site noise levels, the Project related truck trips were added to the heavy truck category in the FHWA noise prediction model. The addition of the Project related truck trips increases the percentage of heavy trucks in the vehicle mix. This approach recognizes that the FHWA noise prediction model is significantly influenced by the number of heavy trucks in the vehicle mix.

Table 6-3 provides the time of day (daytime, evening, and nighttime) vehicle splits. The daily Project truck trip-ends were assigned to the individual off-site study area roadway segments based on the Project truck trip distribution percentages documented in the *Ethanac and Barnett Warehouse Traffic Analysis*. Using the Project truck trips in combination with the Project trip distribution, Urban Crossroads, Inc. calculated the number of additional Project truck trips and vehicle mix percentages for each of the study area roadway segments. Table 6-4 shows the traffic flow by vehicle type (vehicle mix) used for all without Project traffic scenarios, and Tables 6-5 to 6-6 show the vehicle mixes used for the with Project traffic scenarios.

**TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES**

ID	Roadway	Segment	Average Daily Traffic Volumes <sup>1</sup>			
			Existing		Opening Year Cumulative (2024)	
			Without Project	With Project	Without Project	With Project
1	Murrieta Rd.	n/o Ethanac Rd.	3,350	3,368	3,540	3,558
2	Murrieta Rd.	s/o Ethanac Rd.	7,650	7,705	13,450	13,505
3	Barnett Rd.	s/o Ethanac Rd.	2,120	2,517	2,210	2,607
4	Ethanac Rd.	w/o Murrieta Rd.	13,040	13,047	26,040	26,047
5	Ethanac Rd.	e/o Murrieta Rd.	14,860	14,941	32,870	32,951
6	Ethanac Rd.	e/o Barnett Rd.	14,490	14,905	34,020	34,435

<sup>1</sup> Barnett & Ethanac Warehouse Traffic Analysis, EPD Solutions, Inc.



**TABLE 6-3: TIME OF DAY VEHICLE SPLITS**

Vehicle Type	Time of Day Splits <sup>1</sup>			Total of Time of Day Splits
	Daytime	Evening	Nighttime	
Autos	75.55%	13.96%	10.49%	100.00%
Medium Trucks	48.92%	2.17%	48.91%	100.00%
Heavy Trucks	47.30%	5.40%	47.30%	100.00%

<sup>1</sup> County of Riverside Office of Industrial Hygiene. Values rounded to the nearest one-hundredth. Vehicle mix percentage values rounded to the nearest one-hundredth. "Daytime" = 7:00 a.m. to 7:00 p.m.; "Evening" = 7:00 p.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

**TABLE 6-4: WITHOUT PROJECT VEHICLE MIX**

Classification	Total % Traffic Flow			Total
	Autos	Medium Trucks	Heavy Trucks	
All Segments	97.42%	1.84%	0.74%	100.00%

County of Riverside Office of Industrial Hygiene. Values rounded to the nearest one-hundredth. Vehicle mix percentage values rounded to the nearest one-hundredth.

Due to the added Project truck trips, the increase in Project traffic volumes and the distributions of trucks on the study area road segments, the percentage of autos, medium trucks and heavy trucks will vary for each of the traffic scenarios. This explains why the existing and future traffic volumes and vehicle mixes vary between seemingly identical study area roadway segments.

**TABLE 6-5: EXISTING WITH PROJECT VEHICLE MIX**

ID	Roadway	Segment	With Project <sup>1</sup>			
			Autos	Medium Trucks	Heavy Trucks	Total <sup>2</sup>
1	Murrieta Rd.	n/o Ethanac Rd.	97.43%	1.83%	0.74%	100.00%
2	Murrieta Rd.	s/o Ethanac Rd.	97.44%	1.83%	0.73%	100.00%
3	Barnett Rd.	s/o Ethanac Rd.	92.30%	2.49%	5.21%	100.00%
4	Ethanac Rd.	w/o Murrieta Rd.	97.42%	1.84%	0.74%	100.00%
5	Ethanac Rd.	e/o Murrieta Rd.	97.43%	1.83%	0.74%	100.00%
6	Ethanac Rd.	e/o Barnett Rd.	96.56%	1.95%	1.49%	100.00%
7	Ethanac Rd.	e/o I-215 NB Ramps	97.42%	1.84%	0.74%	100.00%

<sup>1</sup> Total of vehicle mix percentage values rounded to the nearest one-hundredth.



**TABLE 6-6: OPENING YEAR CUMULATIVE (2024) WITH PROJECT VEHICLE MIX**

ID	Roadway	Segment	With Project <sup>1</sup>			
			Autos	Medium Trucks	Heavy Trucks	Total <sup>2</sup>
1	Murrieta Rd.	n/o Ethanac Rd.	97.43%	1.83%	0.74%	100.00%
2	Murrieta Rd.	s/o Ethanac Rd.	97.43%	1.83%	0.74%	100.00%
3	Barnett Rd.	s/o Ethanac Rd.	92.48%	2.47%	5.05%	100.00%
4	Ethanac Rd.	w/o Murrieta Rd.	97.42%	1.84%	0.74%	100.00%
5	Ethanac Rd.	e/o Murrieta Rd.	97.43%	1.84%	0.74%	100.00%
6	Ethanac Rd.	e/o Barnett Rd.	97.05%	1.89%	1.07%	100.00%
7	Ethanac Rd.	e/o I-215 NB Ramps	97.42%	1.84%	0.74%	100.00%

<sup>1</sup> Total of vehicle mix percentage values rounded to the nearest one-hundredth.



## 7 OFF-SITE TRAFFIC NOISE ANALYSIS

To assess the off-site transportation CNEL noise level impacts associated with development of the proposed Project, noise contours were developed based on the *Ethanac and Barnett Warehouse Traffic Analysis* prepared by EPD Solutions, Inc. (22) Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway.

### 7.1 TRAFFIC NOISE CONTOURS

Noise contours were used to assess the Project's incremental traffic-related noise impacts at land uses adjacent to roadways conveying Project traffic. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA noise levels. The noise contours do not consider the effect of any existing noise barriers or topography that may attenuate ambient noise levels. In addition, because the noise contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise contributions from the surrounding stationary noise sources within the Project study area. Tables 7-1 to 7-5 present a summary of the exterior traffic noise levels for each traffic condition. Appendix 7.1 includes the traffic noise level contours worksheets for each traffic condition.

**TABLE 7-1: EXISTING WITHOUT PROJECT CONTOURS**

ID	Road	Segment	Receiving Land Use <sup>1</sup>	CNEL at Receiving Land Use (dBA) <sup>2</sup>	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Murrieta Rd.	n/o Ethanac Rd.	Sensitive	64.4	RW	RW	99
2	Murrieta Rd.	s/o Ethanac Rd.	Sensitive	68.0	RW	79	171
3	Barnett Rd.	s/o Ethanac Rd.	Non-Sensitive	62.4	RW	RW	73
4	Ethanac Rd.	w/o Murrieta Rd.	Sensitive	73.8	94	204	439
5	Ethanac Rd.	e/o Murrieta Rd.	Sensitive	74.3	103	222	479
6	Ethanac Rd.	e/o Barnett Rd.	Non-Sensitive	74.2	101	218	471
7	Ethanac Rd.	e/o I-215 NB Ramps	Non-Sensitive	73.7	93	201	433

<sup>1</sup> Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

<sup>2</sup> The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.



**TABLE 7-2: EXISTING WITH PROJECT CONTOURS**

ID	Road	Segment	Receiving Land Use <sup>1</sup>	CNEL at Receiving Land Use (dBA) <sup>2</sup>	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Murrieta Rd.	n/o Ethanac Rd.	Sensitive	64.4	RW	RW	99
2	Murrieta Rd.	s/o Ethanac Rd.	Sensitive	68.0	RW	80	172
3	Barnett Rd.	s/o Ethanac Rd.	Non-Sensitive	67.8	RW	77	166
4	Ethanac Rd.	w/o Murrieta Rd.	Sensitive	73.8	95	204	439
5	Ethanac Rd.	e/o Murrieta Rd.	Sensitive	74.3	103	223	479
6	Ethanac Rd.	e/o Barnett Rd.	Non-Sensitive	75.4	121	261	563
7	Ethanac Rd.	e/o I-215 NB Ramps	Non-Sensitive	73.7	93	201	433

<sup>1</sup> Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

<sup>2</sup> The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.

**TABLE 7-3: OPENING YEAR CUMULATIVE (2024) WITHOUT PROJECT CONTOURS**

ID	Road	Segment	Receiving Land Use <sup>1</sup>	CNEL at Receiving Land Use (dBA) <sup>2</sup>	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Murrieta Rd.	n/o Ethanac Rd.	Sensitive	64.7	RW	RW	102
2	Murrieta Rd.	s/o Ethanac Rd.	Sensitive	70.5	54	116	249
3	Barnett Rd.	s/o Ethanac Rd.	Non-Sensitive	62.6	RW	RW	75
4	Ethanac Rd.	w/o Murrieta Rd.	Sensitive	76.8	150	323	696
5	Ethanac Rd.	e/o Murrieta Rd.	Sensitive	77.8	175	377	812
6	Ethanac Rd.	e/o Barnett Rd.	Non-Sensitive	77.9	179	386	831
7	Ethanac Rd.	e/o I-215 NB Ramps	Non-Sensitive	75.0	114	246	531

<sup>1</sup> Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

<sup>2</sup> The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.



**TABLE 7-4: OPENING YEAR CUMULATIVE (2024) WITH PROJECT CONTOURS**

ID	Road	Segment	Receiving Land Use <sup>1</sup>	CNEL at Receiving Land Use (dBA) <sup>2</sup>	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Murrieta Rd.	n/o Ethanac Rd.	Sensitive	64.7	RW	RW	103
2	Murrieta Rd.	s/o Ethanac Rd.	Sensitive	70.5	54	116	250
3	Barnett Rd.	s/o Ethanac Rd.	Non-Sensitive	67.9	RW	78	168
4	Ethanac Rd.	w/o Murrieta Rd.	Sensitive	76.8	150	323	696
5	Ethanac Rd.	e/o Murrieta Rd.	Sensitive	77.8	175	377	813
6	Ethanac Rd.	e/o Barnett Rd.	Non-Sensitive	78.5	194	419	903
7	Ethanac Rd.	e/o I-215 NB Ramps	Non-Sensitive	75.0	114	246	531

<sup>1</sup> Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

<sup>2</sup> The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.

## 7.2 EXISTING PROJECT TRAFFIC NOISE LEVEL INCREASES

An analysis of existing traffic noise levels plus traffic noise generated by the proposed Project has been included in this report for informational purposes and to fully analyze all the existing traffic scenarios identified in the Traffic Analysis prepared by Urban Crossroads, Inc. However, the analysis of existing off-site traffic noise levels plus traffic noise generated by the proposed Project scenario will not actually occur since the Project would not be fully constructed and operational until Year 2024 conditions. Table 7-1 shows the Existing without Project conditions CNEL noise levels. The Existing without Project exterior noise levels range from 62.4 to 74.3 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-2 shows the Existing with Project conditions ranging from 64.4 to 75.4 dBA CNEL. Table 7-5 shows that the Project off-site traffic noise level increases range from 0.0 to 5.4 dBA CNEL on the study area roadway segments. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level increases on receiving land uses due to the Project-related traffic.

## 7.3 OPENING YEAR CUMULATIVE (2024) TRAFFIC NOISE LEVEL INCREASES

Table 7-3 presents the Opening Year Cumulative (2024) without Project conditions CNEL noise levels. The Opening Year Cumulative (2024) without Project exterior noise levels range from 62.6 to 77.9 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-4 shows that the Opening Year Cumulative (2024) with Project conditions will range from 64.7 to 78.5 dBA CNEL. Table 7-6 shows that the Project off-site traffic noise level increases range from 0.0 to 5.3 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level increases on receiving land uses due to the Project-related traffic.



TABLE 7-5: EXISTING WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Road	Segment	Receiving Land Use <sup>1</sup>	CNEL at Receiving Land Use (dBA) <sup>1</sup>			Incremental Noise Level Increase Threshold <sup>2</sup>	
				No Project	With Project	Project Addition	Limit	Exceeded?
1	Murrieta Rd.	n/o Ethanac Rd.	Sensitive	64.4	64.4	0.0	3.0	No
2	Murrieta Rd.	s/o Ethanac Rd.	Sensitive	68.0	68.0	0.0	1.5	No
3	Barnett Rd.	s/o Ethanac Rd.	Non-Sensitive	62.4	67.8	5.4	n/a	No
4	Ethanac Rd.	w/o Murrieta Rd.	Sensitive	73.8	73.8	0.0	1.5	No
5	Ethanac Rd.	e/o Murrieta Rd.	Sensitive	74.3	74.3	0.0	1.5	No
6	Ethanac Rd.	e/o Barnett Rd.	Non-Sensitive	74.2	75.4	1.2	3.0	No
7	Ethanac Rd.	e/o I-215 NB Ramps	Non-Sensitive	73.7	73.7	0.0	3.0	No

<sup>1</sup> Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

<sup>2</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.

<sup>3</sup> Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?



TABLE 7-6: OPENING YEAR CUMULATIVE (2024) WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Road	Segment	Receiving Land Use <sup>1</sup>	CNEL at Receiving Land Use (dBA) <sup>1</sup>			Incremental Noise Level Increase Threshold <sup>2</sup>	
				No Project	With Project	Project Addition	Limit	Exceeded?
1	Murrieta Rd.	n/o Ethanac Rd.	Sensitive	64.7	64.7	0.0	3.0	No
2	Murrieta Rd.	s/o Ethanac Rd.	Sensitive	70.5	70.5	0.0	1.5	No
3	Barnett Rd.	s/o Ethanac Rd.	Non-Sensitive	62.6	67.9	5.3	n/a	No
4	Ethanac Rd.	w/o Murrieta Rd.	Sensitive	76.8	76.8	0.0	1.5	No
5	Ethanac Rd.	e/o Murrieta Rd.	Sensitive	77.8	77.8	0.0	1.5	No
6	Ethanac Rd.	e/o Barnett Rd.	Non-Sensitive	77.9	78.5	0.6	3.0	No
7	Ethanac Rd.	e/o I-215 NB Ramps	Non-Sensitive	75.0	75.0	0.0	3.0	No

<sup>1</sup> Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

<sup>2</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.

<sup>3</sup> Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?



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## 8 RECEIVER LOCATIONS

To assess the potential for long-term operational and short-term construction noise impacts, the following sensitive receiver locations, as shown on Exhibit 8-A, were identified as representative locations for analysis. Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas. Moderately noise-sensitive land uses typically include multi-family dwellings, hotels, motels, dormitories, outpatient clinics, cemeteries, golf courses, country clubs, athletic/tennis clubs, and equestrian clubs. Land uses that are considered relatively insensitive to noise include business, commercial, and professional developments. Land uses that are typically not affected by noise include: industrial, manufacturing, utilities, agriculture, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals.

To describe the potential off-site Project noise levels, six receiver locations in the vicinity of the Project site were identified. The selection of receiver locations is based on FHWA guidelines and is consistent with additional guidance provided by Caltrans and the FTA, as previously described in Section 5.2. Other sensitive land uses in the Project study area that are located at greater distances than those identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures. Distance is measured in a straight line from the project boundary to each receiver location.

- R1: Location R1 represents the existing noise sensitive residence at 26038 Hull Street, approximately 1,816 feet west of the Project site. Receiver R1 is placed in the private outdoor living areas (backyards) facing the Project site. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.
- R2: Location R2 represents the existing noise sensitive residence at 26515 Alta Avenue, approximately 2,435 feet southeast of the Project site. Receiver R2 is placed in the private outdoor living areas (backyards) facing the Project site. A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment.
- R3: Location R3 represents the existing noise sensitive residence at 26635 Summer Sunshine Drive, approximately 1,710 feet southeast of the Project site. Receiver R3 is placed in the private outdoor living areas (backyards) facing the Project site. A 24-hour noise measurement was taken near this location, L3, to describe the existing ambient noise environment.
- R4: Location R4 represents the nearest noise sensitive receiver location within the planned DR Horton residential project located approximately 1,092 feet south of the Project site. Receiver R4 is placed in the private outdoor living areas (backyards) facing the Project site. A 24-hour noise measurement was taken near this location, L3, to describe the existing ambient noise environment.
- R5: Location R5 represents the existing noise sensitive residence at 26458 Starr Drive, approximately 1,535 feet southwest of the Project site. Receiver R6 is placed in the private outdoor living areas (backyards) facing the Project site. A 24-hour noise

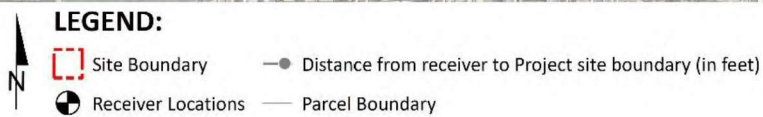


measurement was taken near this location, L4, to describe the existing ambient noise environment.

- R6: Location R6 represents the existing noise sensitive residence at 26340 Corsica Lane, approximately 1,445 feet west of the Project site. Receiver R6 is placed in the private outdoor living areas (backyards) facing the Project site. A 24-hour noise measurement was taken near this location, L5, to describe the existing ambient noise environment.
- R7: Location R7 represents the property line of the planned future residential land use within the Green Valley Specific Plan, approximately 1,121 feet northwest of the Project site. No noise sensitive receivers currently exist at Location R7 that will perceive a Project related noise level increase over time.
- R8: Location R8 represents the property line of the planned future multi-family residential land use within the Green Valley Specific Plan, approximately 197 feet northwest of the Project site. No noise sensitive receivers currently exist at Location R7 that will perceive a Project related noise level increase over time.



# EXHIBIT 8-A: RECEIVER LOCATIONS





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## 9 OPERATIONAL NOISE IMPACTS

This section analyzes the potential stationary-source operational noise impacts at the nearest receiver locations, identified in Section 8, resulting from the operation of the proposed Ethanac and Barnett Warehouse Project. Exhibit 9-A identifies the noise source locations used to assess the operational noise levels.

### 9.1 OPERATIONAL NOISE SOURCES

This operational noise analysis is intended to describe noise level impacts associated with the expected typical of daytime and nighttime activities at the Project site. Consistent with similar warehouse uses, the Project business operations would primarily be conducted within the enclosed building, except for traffic movement, parking, as well as loading and unloading of trucks at designated loading bays. The on-site Project-related noise sources are expected to include: loading dock activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements.

### 9.2 REFERENCE NOISE LEVELS

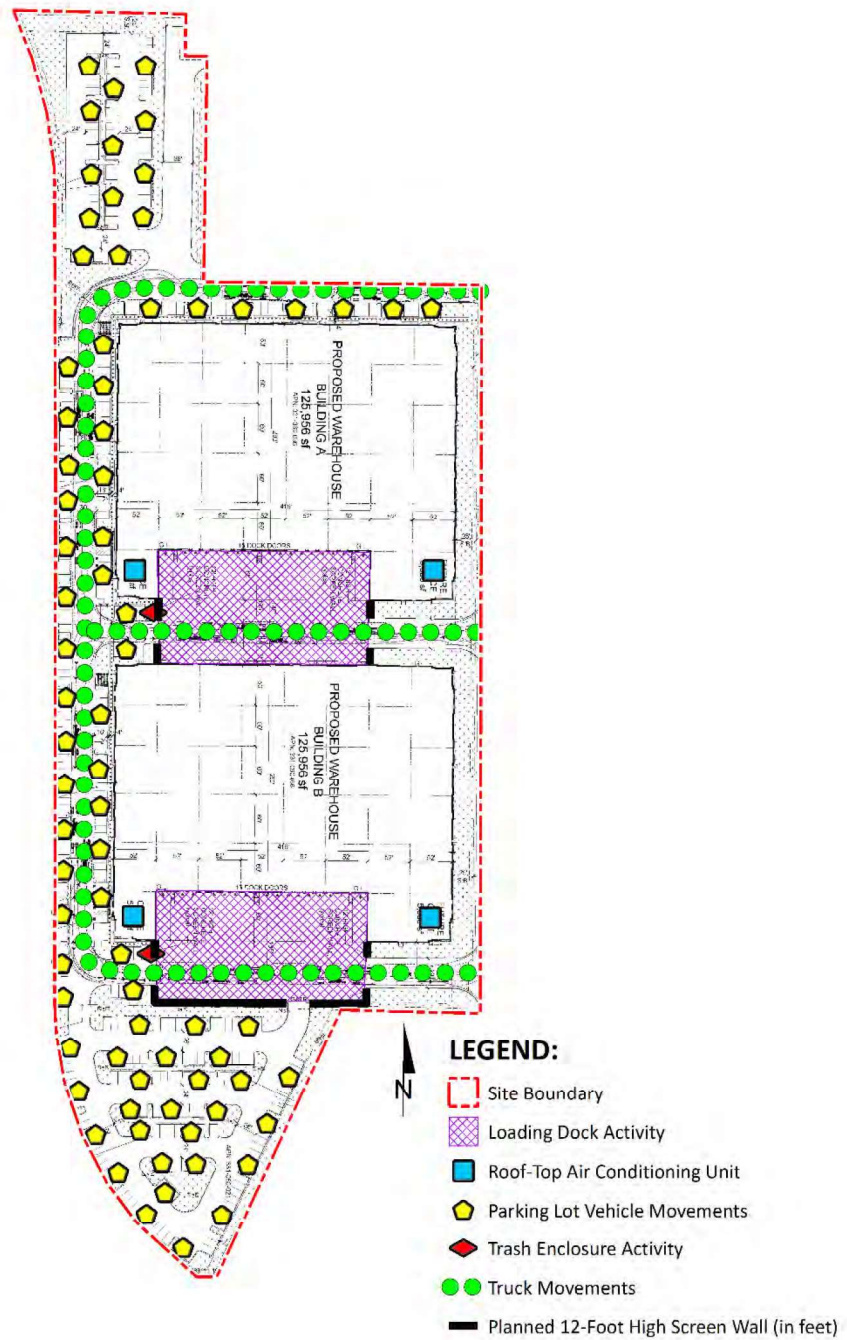
To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed Project. This section provides a detailed description of the reference dBA  $L_{eq}$  and dBA  $L_{max}$  noise level measurements shown on Table 9-1 used to estimate the Project operational noise impacts. It is important to note that the following projected noise levels assume the worst-case noise environment with the loading dock activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements all operating at the same time. These sources of noise activity will likely vary throughout the day.

#### 9.2.1 MEASUREMENT PROCEDURES

The reference noise level measurements presented in this section were collected using a Larson Davis LxT Type 1 precision sound level meter (serial number 01146). The LxT sound level meter was calibrated using a Larson-Davis calibrator, Model CAL 200, was programmed in "slow" mode to record noise levels in "A" weighted form and was located at approximately five feet above the ground elevation for each measurement. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (18)



# EXHIBIT 9-A: OPERATIONAL NOISE SOURCE LOCATIONS





**TABLE 9-1: REFERENCE NOISE LEVEL MEASUREMENTS**

Noise Source <sup>1</sup>	Noise Source Height (Feet)	Min./Hour <sup>2</sup>		Reference Noise Level (dBA L <sub>eq</sub> ) @ 50 Feet	Reference Noise Level (dBA L <sub>max</sub> ) @ 50 Feet
		Day	Night		
Loading Dock Activity	8'	60	60	65.7	74.8
Roof-Top Air Conditioning Units	5'	39	28	57.2	57.7
Trash Enclosure Activity	5'	60	60	57.3	71.1
Parking Lot Vehicle Movements	5'	60	60	52.6	59.7
Truck Movements	8'	60	60	59.8	73.1

<sup>1</sup> As measured by Urban Crossroads, Inc.

<sup>2</sup> Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site.

"Daytime" = 7:00 a.m. - 10:00 p.m.; "Nighttime" = 10:00 p.m. - 7:00 a.m.

<sup>3</sup> Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings. Sound power levels calculated using the CadnaA noise model at the reference distance to the noise source. Numbers may vary due to size differences between point and area noise sources.

### 9.2.2 LOADING DOCK ACTIVITY

The reference loading dock activities are intended to describe the typical outdoor operational noise activities associated with the Project. This includes truck idling, deliveries, backup alarms, trailer docking including a combination of tractor trailer semi-trucks, two-axle delivery trucks, and background operation activities. The reference noise level measurement was taken in the center of the loading dock activity area and represents multiple concurrent noise sources resulting in a combined noise level of 65.7 dBA L<sub>eq</sub> at a uniform distance of 50 feet. Specifically, the reference noise level measurement represents one truck located approximately 30 feet from the noise level meter with another truck passing by to park roughly 20 feet away, both with their engines idling. Throughout the reference noise level measurement, a separate docked and running reefer truck was located approximately 50 feet east of the measurement location. Additional background noise sources included truck pass-by noise, truck drivers talking to each other next to docked trucks, and air brake release noise when trucks parked.

### 9.2.3 ROOF-TOP AIR CONDITIONING UNITS

The noise level measurements describe a single mechanical roof-top air conditioning unit. The reference noise level represents a Lennox SCA120 series 10-ton model packaged air conditioning unit. At the uniform reference distance of 50 feet, the reference noise level is 57.2 dBA L<sub>eq</sub>. Based on the typical operating conditions observed over a four-day measurement period, the roof-top air conditioning units are estimated to operate for an average 39 minutes per hour during the daytime hours, and 28 minutes per hour during the nighttime hours. These operating conditions reflect peak summer cooling requirements with measured temperatures approaching 96 degrees Fahrenheit (°F) with average daytime temperatures of 82°F. For this noise analysis, the air conditioning units are expected to be located on the roof of the Project building.



#### 9.2.4 TRASH ENCLOSURE ACTIVITY

To describe the noise levels associated with a trash enclosure activity, Urban Crossroads collected a reference noise level measurement at an existing trash enclosure containing two dumpster bins. The trash enclosure noise levels describe metal gates opening and closing, metal scraping against concrete floor sounds, dumpster movement on metal wheels, and trash dropping into the metal dumpster. The reference noise levels describe trash enclosure noise activities when trash is dropped into an empty metal dumpster, as would occur at the Project Site. The measured reference noise level at the uniform 50-foot reference distance is 57.3 dBA  $L_{eq}$  for the trash enclosure activity. The reference noise level describes the expected noise source activities associated with the trash enclosures for the Project's proposed building.

#### 9.2.5 PARKING LOT VEHICLE MOVEMENTS

To describe the on-site parking lot activity, a long-term 29-hour reference noise level measurement was collected in the center of activity within the staff parking lot of an Amazon warehouse distribution center. At 50 feet from the center of activity, the parking lot produced a reference noise level of 52.6 dBA  $L_{eq}$ . Parking activities are expected to take place during the full hour (60 minutes) throughout the daytime and evening hours. The parking lot noise levels are mainly due to cars pulling in and out of parking spaces in combination with car doors opening and closing.

#### 9.2.6 TRUCK MOVEMENTS

The truck movements reference noise level measurement was collected over a period of 1 hour and 28 minutes and represent multiple heavy trucks entering and exiting the outdoor loading dock area producing a reference noise level of 59.8 dBA  $L_{eq}$  at 50 feet. The noise sources included at this measurement location account for trucks entering and exiting the Project driveways and maneuvering in and out of the outdoor loading dock activity area.

### 9.3 CADNAA NOISE PREDICTION MODEL

To fully describe the exterior operational noise levels from the Project, Urban Crossroads, Inc. developed a noise prediction model using the CadnaA (Computer Aided Noise Abatement) computer program. CadnaA can analyze multiple types of noise sources using the spatially accurate Project site plan, georeferenced Nearmap aerial imagery, topography, buildings, and barriers in its calculations to predict outdoor noise levels.

Using the ISO 9613-2 protocol, CadnaA will calculate the distance from each noise source to the noise receiver locations, using the ground absorption, distance, and barrier/building attenuation inputs to provide a summary of noise level at each receiver and the partial noise level contributions by noise source. Consistent with the ISO 9613-2 protocol, the CadnaA noise prediction model relies on the reference sound power level ( $L_w$ ) to describe individual noise sources. While sound pressure levels (e.g.,  $L_{eq}$ ) quantify in decibels the intensity of given sound sources at a reference distance, sound power levels ( $L_w$ ) are connected to the sound source and are independent of distance. Sound pressure levels vary substantially with distance from the source and diminish because of intervening obstacles and barriers, air absorption, wind, and



other factors. Sound power is the acoustical energy emitted by the sound source and is an absolute value that is not affected by the environment.

The operational noise level calculations provided in this noise study account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. A default ground attenuation factor of 0.5 was used in the CadnaA noise analysis to account for mixed ground representing a combination of hard and soft surfaces. Appendix 9.1 includes the detailed noise model inputs used to estimate the Project operational noise levels presented in this section.

## 9.4 PROJECT OPERATIONAL NOISE LEVELS

Using the reference noise levels to represent the proposed Project operations that include loading dock activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements, Urban Crossroads, Inc. calculated the operational source noise levels that are expected to be generated at the Project site and the Project-related noise level increases that would be experienced at each of the sensitive receiver locations. Table 9-2 shows the Project operational noise levels during the daytime hours of 7:00 a.m. to 10:00 p.m. The daytime hourly noise levels at the off-site receiver are expected to range from 38.4 to 44.7 dBA  $L_{eq}$  and 44.8 to 50.7 dBA  $L_{max}$ .

**TABLE 9-2: DAYTIME PROJECT OPERATIONAL NOISE LEVELS**

Noise Source <sup>1</sup>	Operational Noise Levels by Receiver Location <sup>2</sup>							
	R1	R2	R3	R4	R5	R6	R7	R8
Loading Dock Activity	37.9	38.1	39.3	42.3	40.6	44.3	38.3	38.4
Roof-Top Air Conditioning Units	23.2	21.8	23.3	25.6	24.5	25.2	25.1	26.8
Trash Enclosure Activity	19.6	0.3	14.6	21.9	20.6	23.9	22.2	23.5
Parking Lot Vehicle Movements	29.7	23.2	27.0	31.3	30.1	31.4	42.0	49.2
Truck Movements	25.8	18.3	20.2	24.6	24.0	26.6	38.7	44.4
<b>Total (All Noise Sources)</b>	<b>38.9</b>	<b>38.4</b>	<b>39.7</b>	<b>42.8</b>	<b>41.2</b>	<b>44.7</b>	<b>44.8</b>	<b>50.7</b>

<sup>1</sup> See Exhibit 9-A for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1.

<sup>2</sup> Receivers R1-R6 are expressed as dBA  $L_{eq}$  and Receivers R7-R8 are expressed as dBA  $L_{max}$ .

Table 9-3 shows the Project operational noise levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. The nighttime hourly noise levels at the off-site receiver locations are expected to range from 38.3 to 44.7 dBA  $L_{eq}$  and 44.8 to 50.7 dBA  $L_{max}$ . The minor differences between the daytime and nighttime noise levels are largely related to the estimated duration of noise activity as outlined in Table 9-1 and Appendix 9.1.



**TABLE 9-3: NIGHTTIME PROJECT OPERATIONAL NOISE LEVELS**

Noise Source <sup>1</sup>	Operational Noise Levels by Receiver Location <sup>2</sup>							
	R1	R2	R3	R4	R5	R6	R7	R8
Loading Dock Activity	37.9	38.1	39.3	42.3	40.6	44.3	38.3	38.4
Roof-Top Air Conditioning Units	20.8	19.4	20.9	23.2	22.1	22.8	22.7	24.4
Trash Enclosure Activity	19.6	0.3	14.6	21.9	20.6	23.9	22.2	23.5
Parking Lot Vehicle Movements	29.7	23.2	27.0	31.3	30.1	31.4	42.0	49.2
Truck Movements	25.8	18.3	20.2	24.6	24.0	26.6	38.7	44.4
<b>Total (All Noise Sources)</b>	<b>38.9</b>	<b>38.3</b>	<b>39.7</b>	<b>42.8</b>	<b>41.2</b>	<b>44.7</b>	<b>44.8</b>	<b>50.7</b>

<sup>1</sup> See Exhibit 9-A for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1.

<sup>2</sup> Receivers R1-R6 are expressed as dBA  $L_{eq}$  and Receivers R7-R8 are expressed as dBA  $L_{max}$ .

## 9.5 PROJECT OPERATIONAL NOISE LEVEL COMPLIANCE

To demonstrate compliance with local noise regulations, the Project-only operational noise levels are evaluated against exterior noise level thresholds based on the City of Menifee and the City of Perris exterior noise level standards at nearby noise-sensitive receiver locations. Table 9-4 shows the operational noise levels associated with Ethanac and Barnett Warehouse Project will not exceed the applicable City of Menifee or City of Perris daytime and nighttime exterior noise level standards. Therefore, the operational noise impacts are considered *less than significant* at the nearby noise-sensitive receiver locations.

**TABLE 9-4: OPERATIONAL NOISE LEVEL COMPLIANCE**

Receiver Location <sup>1</sup>	Project Operational Noise Levels <sup>2</sup>		Exterior Noise Level Standards <sup>3</sup>		Noise Level Standards Exceeded? <sup>4</sup>	
	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime
R1	38.9	38.9	65.0	45.0	No	No
R2	38.4	38.3	65.0	45.0	No	No
R3	39.7	39.7	65.0	45.0	No	No
R4	42.8	42.8	65.0	45.0	No	No
R5	41.2	41.2	65.0	45.0	No	No
R6	44.7	44.7	65.0	45.0	No	No
R7	44.8	44.8	80.0	60.0	No	No
R8	50.7	50.7	80.0	60.0	No	No

<sup>1</sup> See Exhibit 8-A for the receiver locations. Receivers R1-R6 are expressed as dBA  $L_{eq}$  and Receivers R7-R8 are expressed as dBA  $L_{max}$ .

<sup>2</sup> Proposed Project operational noise level calculations are included in Appendix 9-1.

<sup>3</sup> Exterior noise standards by jurisdiction outlined on Table 4-1.

<sup>4</sup> Do the estimated Project operational noise source activities exceed the noise level standards?

"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.



## 9.6 PROJECT OPERATIONAL NOISE LEVEL INCREASES

To describe the Project operational noise level increases, the Project operational noise levels are combined with the existing ambient noise levels measurements for the nearby receiver locations potentially impacted by Project operational noise sources. Since the units used to measure noise, decibels (dB), are logarithmic units, the Project-operational and existing ambient noise levels cannot be combined using standard arithmetic equations. (2) Instead, they must be logarithmically added using the following base equation:

$$SPL_{Total} = 10\log_{10}[10^{SPL1/10} + 10^{SPL2/10} + \dots 10^{SPLn/10}]$$

Where “SPL1,” “SPL2,” etc. are equal to the sound pressure levels being combined, or in this case, the Project-operational and existing ambient noise levels. The difference between the combined Project and ambient noise levels describes the Project noise level increases to the existing ambient noise environment. Noise levels that would be experienced at receiver locations when Project-source noise is added to the daytime and nighttime ambient conditions are presented on Tables 9-5 and 9-6, respectively. As indicated on Tables 9-5, the Project will generate a daytime operational noise level increases ranging from 0.0 to 1.2 dBA  $L_{eq}$  at the nearest receiver locations. Table 9-6 shows that the Project will generate a nighttime operational noise level increases ranging from 0.0 to 1.3 dBA  $L_{eq}$  at the nearest receiver locations. Project-related operational noise level increases will satisfy the operational noise level increase significance criteria presented in Table 4-1, and, therefore, the increases at the sensitive receiver locations will be *less than significant*.

**TABLE 9-5: DAYTIME PROJECT OPERATIONAL NOISE LEVEL INCREASES**

Receiver Location <sup>1</sup>	Total Project Operational Noise Level <sup>2</sup>	Measurement Location <sup>3</sup>	Reference Ambient Noise Levels <sup>4</sup>	Combined Project and Ambient <sup>5</sup>	Project Increase <sup>6</sup>	Increase Criteria <sup>7</sup>	Increase Criteria Exceeded?
R1	38.9	L1	48.1	48.6	0.5	5.0	No
R2	38.4	L2	61.7	61.7	0.0	5.0	No
R3	39.7	L3	47.8	48.4	0.6	5.0	No
R4	42.8	L3	47.8	49.0	1.2	5.0	No
R5	41.2	L4	53.6	53.8	0.2	5.0	No
R6	44.7	L5	51.6	52.4	0.8	5.0	No

<sup>1</sup> See Exhibit 8-A for the receiver locations.

<sup>2</sup> Total Project daytime operational noise levels as shown on Table 9-2.

<sup>3</sup> Reference noise level measurement locations as shown on Exhibit 5-A.

<sup>4</sup> Observed daytime ambient noise levels as shown on Table 5-1.

<sup>5</sup> Represents the combined ambient conditions plus the Project activities.

<sup>6</sup> The noise level increase expected with the addition of the proposed Project activities.

<sup>7</sup> Significance increase criteria as shown on Table 4-1.



**TABLE 9-6: NIGHTTIME OPERATIONAL NOISE LEVEL INCREASES**

Receiver Location <sup>1</sup>	Total Project Operational Noise Level <sup>2</sup>	Measurement Location <sup>3</sup>	Reference Ambient Noise Levels <sup>4</sup>	Combined Project and Ambient <sup>5</sup>	Project Increase <sup>6</sup>	Increase Criteria <sup>7</sup>	Increase Criteria Exceeded?
R1	38.9	L1	49.8	50.1	0.3	5.0	No
R2	38.3	L2	59.9	59.9	0.0	5.0	No
R3	39.7	L3	47.2	47.9	0.7	5.0	No
R4	42.8	L3	47.2	48.5	1.3	5.0	No
R5	41.2	L4	54.2	54.4	0.2	5.0	No
R6	44.7	L5	53.8	54.3	0.5	5.0	No

<sup>1</sup> See Exhibit 8-A for the receiver locations.

<sup>2</sup> Total Project nighttime operational noise levels as shown on Table 9-3.

<sup>3</sup> Reference noise level measurement locations as shown on Exhibit 5-A.

<sup>4</sup> Observed nighttime ambient noise levels as shown on Table 5-1.

<sup>5</sup> Represents the combined ambient conditions plus the Project activities.

<sup>6</sup> The noise level increase expected with the addition of the proposed Project activities.

<sup>7</sup> Significance increase criteria as shown on Table 4-1.



## 10 CONSTRUCTION ANALYSIS

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Project. Exhibit 10-A shows the construction activity boundaries in relation to the nearest sensitive receiver locations previously described in Section 6. Section 9.215.060(C) of the City's Development Code indicates that private construction projects, located within one-quarter of a mile from an occupied residence, are considered exempt from the Development Code noise standards if they occur within the permitted hours of 6:30 a.m. and 7:00 p.m., with no activity allowed on Sundays and nationally recognized holidays (11).

In addition, since neither the City of Menifee General Plan or Development Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers for CEQA analysis purposes. Therefore, a numerical construction threshold based on Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual is used for analysis of daytime construction impacts. The FTA considers a daytime exterior construction noise level of 80 dBA  $L_{eq}$  as a reasonable threshold for noise sensitive residential land use. (8 p. 179). The City of Perris Municipal Code, Section 7.34.060, has identified a construction noise level standard of 80 dBA  $L_{max}$  for residential zones within the City of Perris. (11)

### 10.1 CONSTRUCTION NOISE LEVELS

The FTA *Transit Noise and Vibration Impact Assessment Manual* recognizes that construction projects are accomplished in several different stages and outlines the procedures for assessing noise impacts during construction. Each stage has a specific equipment mix, depending on the work to be completed during that stage. As a result of the equipment mix, each stage has its own noise characteristics; some stages have higher continuous noise levels than others, and some have higher impact noise levels than others. The Project construction activities are expected to occur in the following stages:

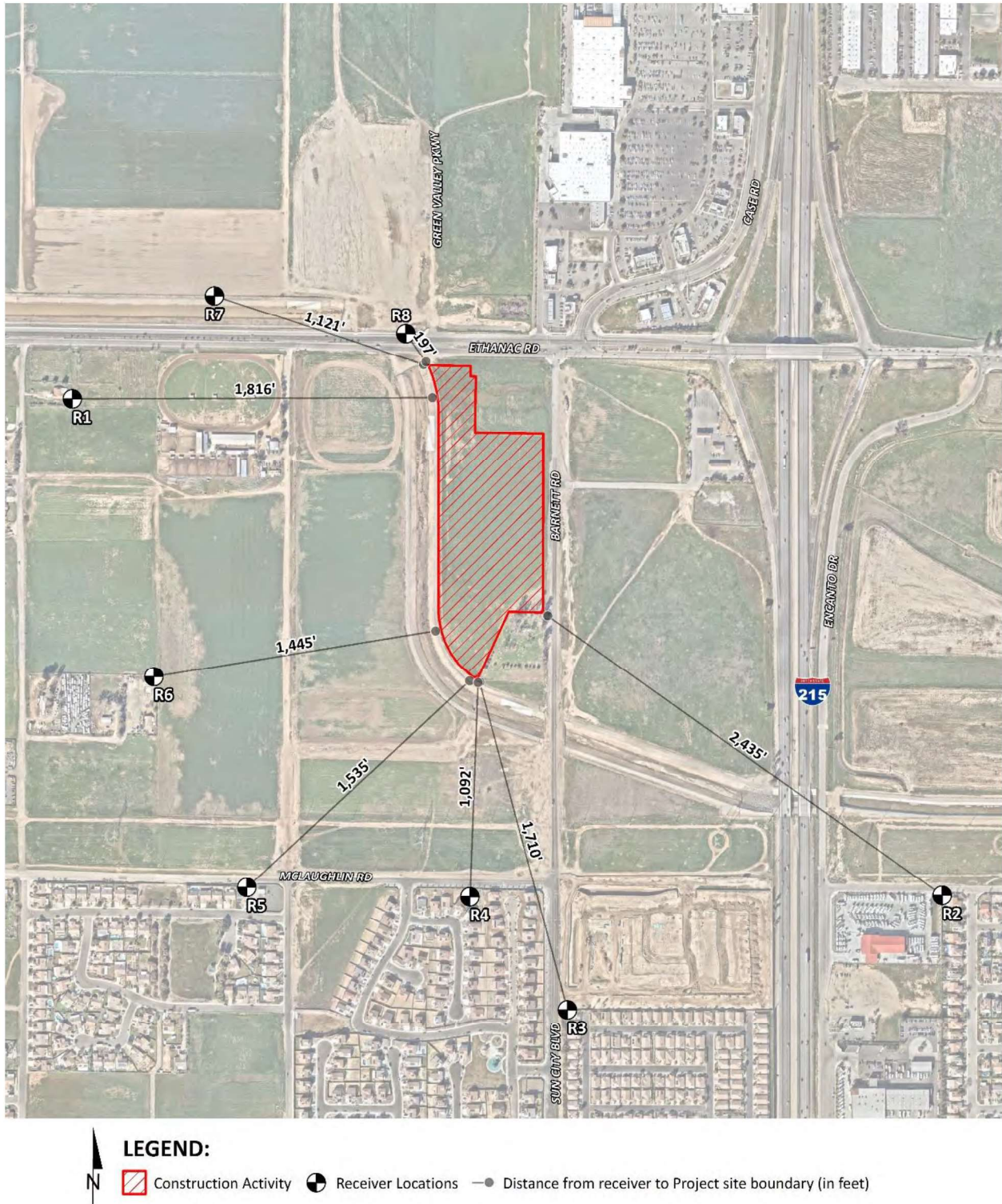
- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

### 10.2 CONSTRUCTION REFERENCE NOISE LEVELS

To describe construction noise activities, this construction noise analysis was prepared using reference construction equipment noise levels from the Federal Highway Administration (FHWA) published the Roadway Construction Noise Model (RCNM), which includes a national database of construction equipment reference noise emission levels. (23) The RCNM equipment database, provides a comprehensive list of the noise generating characteristics for specific types of construction equipment. In addition, the database provides an acoustical usage factor to estimate the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation.



# EXHIBIT 10-A: CONSTRUCTION NOISE SOURCE LOCATIONS





### 10.3 CONSTRUCTION NOISE ANALYSIS

Using the reference construction equipment noise levels and the CadnaA noise prediction model, calculations of the Project construction noise level impacts at the nearby sensitive receiver locations were completed. Consistent with FTA guidance for general construction noise assessment, Table 10-1 presents the combined noise levels for the loudest construction equipment, assuming they operate at the same time. As shown on Table 10-2, the construction noise levels are expected to range from 42.0 to 52.9 dBA  $L_{eq}$  and 57.9 to 64.8 dBA  $L_{max}$  at the nearby receiver locations. Appendix 10.1 includes the detailed CadnaA construction noise model inputs.

**TABLE 10-1: CONSTRUCTION REFERENCE NOISE LEVELS**

Construction Stage	Reference Construction Activity	Reference Noise Level @ 50 Feet (dBA $L_{eq}$ ) <sup>1</sup>	Combined Noise Level (dBA $L_{eq}$ ) <sup>2</sup>	Combined Sound Power Level (PWL) <sup>3</sup>
Site Preparation	Crawler Tractors	78	80	112
	Hauling Trucks	72		
	Rubber Tired Dozers	75		
Grading	Graders	81	83	115
	Excavators	77		
	Compactors	76		
Building Construction	Cranes	73	81	113
	Tractors	80		
	Welders	70		
Paving	Pavers	74	83	115
	Paving Equipment	82		
	Rollers	73		
Architectural Coating	Cranes	73	77	109
	Air Compressors	74		
	Generator Sets	70		

<sup>1</sup> FHWA Roadway Construction Noise Model (RCNM).

<sup>2</sup> Represents the combined noise level for all equipment assuming they operate at the same time consistent with FTA Transit Noise and Vibration Impact Assessment guidance.

<sup>3</sup> Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings. Sound power levels calibrated using the CadnaA noise model at the reference distance to the noise source.



**TABLE 10-2: CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY**

Receiver Location <sup>1</sup>	Construction Noise Levels					
	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Levels <sup>2</sup>
R1	48.1	51.1	49.1	51.1	45.1	51.1
R2	45.0	48.0	46.0	48.0	42.0	48.0
R3	47.0	50.0	48.0	50.0	44.0	50.0
R4	49.9	52.9	50.9	52.9	46.9	52.9
R5	48.2	51.2	49.2	51.2	45.2	51.2
R6	49.7	52.7	50.7	52.7	46.7	52.7
R7	54.9	57.9	55.9	57.9	51.9	57.9
R8	61.8	64.8	62.8	64.8	58.8	64.8

<sup>1</sup> Noise receiver locations are shown on Exhibit 10-A. Receivers R1-R6 are expressed as dBA  $L_{eq}$  and Receivers R7-R8 are expressed as dBA  $L_{max}$ .

<sup>2</sup> Construction noise level calculations based on distance from the construction activity, which is measured from the Project site boundary to the nearest receiver locations. CadnaA construction noise model inputs are included in Appendix 10.1.

## 10.4 CONSTRUCTION NOISE LEVEL COMPLIANCE

To evaluate whether the Project will generate potentially significant short-term noise levels at nearest receiver locations, a construction-related daytime noise level threshold for Receiver locations R1-R6 of 80 dBA  $L_{eq}$  is used as a reasonable threshold to assess the daytime construction noise level impacts and 80 dBA  $L_{max}$  for receivers R7-R8 in the City of Perris. The construction noise analysis shows that the nearest receiver locations will not exceed the daytime significance thresholds during Project construction activities as shown on Table 10-3. Therefore, the noise impacts due to Project construction noise are considered *less than significant* at all receiver locations.

## 10.5 NIGHTTIME CONCRETE POUR NOISE ANALYSIS

It is our understanding that nighttime concrete pouring activities may occur as a part of Project building construction activities. Nighttime concrete pouring activities are often used to support reduced concrete mixer truck transit times and lower air temperatures than during the daytime hours and are generally limited to the actual building pad area as shown on Exhibit 10-B. Since the nighttime concrete pours will take place outside the permitted City of Menifee Development Code, Section 9.215.060(C) of the City of Menifee Development Code indicates that construction activity is restricted to the hours within 6:30 a.m. and 7:00 p.m. with no activity allowed on Sundays and nationally recognized holidays. The Project Applicant will be required to obtain authorization for nighttime work from the City of Menifee. Any nighttime construction noise activities shall satisfy the noise limits outlined in Table 4-1.



**TABLE 10-3: CONSTRUCTION NOISE LEVEL COMPLIANCE**

Receiver Location <sup>1</sup>	Construction Noise Levels (dBA L <sub>eq</sub> )		
	Highest Construction Noise Levels <sup>2</sup>	Threshold <sup>3</sup>	Threshold Exceeded? <sup>4</sup>
R1	51.1	80	No
R2	48.0	80	No
R3	50.0	80	No
R4	52.9	80	No
R5	51.2	80	No
R6	52.7	80	No
R7	57.9	80	No
R8	64.8	80	No

<sup>1</sup> Noise receiver locations are shown on Exhibit 10-A. Receivers R1-R6 are expressed as dBA L<sub>eq</sub> and Receivers R7-R8 are expressed as dBA L<sub>max</sub>.

<sup>2</sup> Highest construction noise level calculations based on distance from the construction noise source activity to the nearest receiver locations as shown on Table 10-2.

<sup>3</sup> Construction noise level thresholds as shown on Table 4-1.

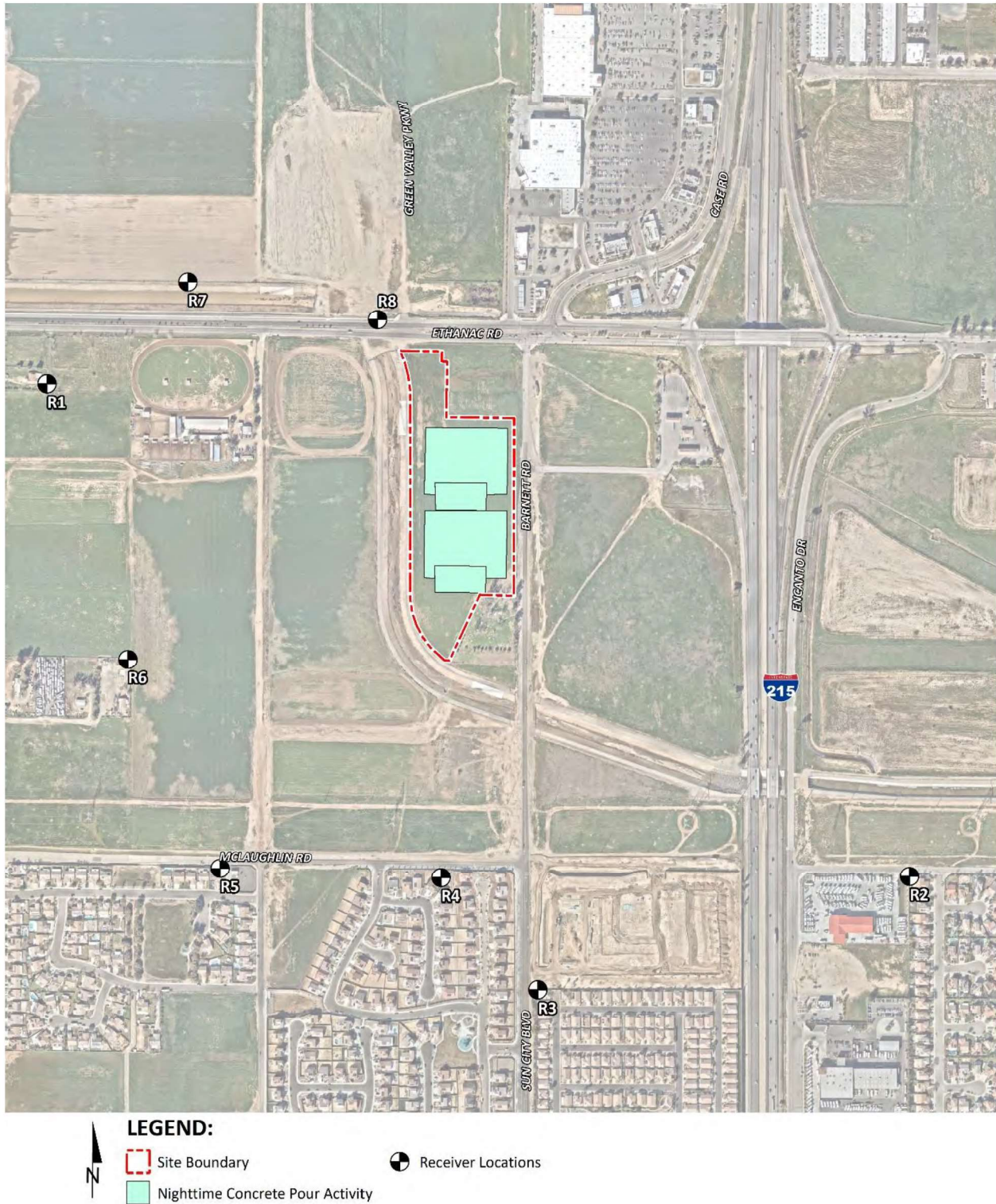
<sup>4</sup> Do the estimated Project construction noise levels exceed the construction noise level threshold?

#### **CITY OF MENIFEE CITY OF MENIFEE CITY OF MENIFEE 10.5.1 NIGHTTIME CONCRETE POUR REFERENCE NOISE LEVEL MEASUREMENTS**

To estimate the noise levels due to nighttime concrete pouring activities, sample reference noise level measurements were taken during a nighttime concrete pour at a construction site. Urban Crossroads, Inc. collected short-term nighttime concrete pour reference noise level measurements during the noise-sensitive nighttime hours between 1:00 a.m. to 2:00 a.m. at 27334 San Bernardino Avenue in the City of Redlands. The reference noise levels describe the expected concrete pour noise sources that may include concrete mixer truck movements and pouring activities, concrete paving equipment, rear mounted concrete mixer truck backup alarms, engine idling, air brakes, generators, and workers communicating/whistling. To describe the nighttime concrete pour noise levels associated with the construction of the Ethanac and Barnett Warehouse, this analysis relies on reference sound pressure level of 67.7 dBA L<sub>eq</sub> at 50 feet.



**EXHIBIT 10-B: NIGHTTIME CONCRETE POUR NOISE SOURCE AND RECEIVER LOCATIONS**





### 10.5.2 NIGHTTIME CONCRETE POUR NOISE LEVEL COMPLIANCE

As shown on Table 10-4, the noise levels associated with the nighttime concrete pour activities are estimated to range from 34.8 to 39.5 dBA  $L_{eq}$  and 44.3 to 49.4 dBA  $L_{max}$  will not exceed the City of Menifee or City of Perris stationary-source nighttime exterior hourly average  $L_{eq}$  residential noise level threshold at all the receiver locations. Based on the results of this analysis, all nearest noise receiver locations will experience *less than significant* impacts due to the Project related nighttime concrete pour activities. Appendix 10.2 includes the CadnaA nighttime concrete pour noise model inputs.

**TABLE 10-4: NIGHTTIME CONCRETE POUR NOISE LEVEL COMPLIANCE**

Receiver Location <sup>1</sup>	Construction Noise Levels (dBA $L_{eq}$ )		
	Paving Construction <sup>2</sup>	Nighttime Threshold <sup>3</sup>	Threshold Exceeded? <sup>4</sup>
R1	37.4	45	No
R2	34.8	45	No
R3	36.7	45	No
R4	39.5	45	No
R5	37.8	45	No
R6	39.2	45	No
R7	44.3	60	No
R8	49.4	60	No

<sup>1</sup> Noise receiver locations are shown on Exhibit 10-B. Receivers R1-R6 are expressed as dBA  $L_{eq}$  and Receivers R7-R8 are expressed as dBA  $L_{max}$ .

<sup>2</sup> Paving construction noise level calculations based on distance from the construction noise source activity to nearby receiver locations.

<sup>3</sup> Exterior nighttime noise level standards as shown on Table 4-1.

<sup>4</sup> Do the estimated Project construction noise levels exceed the nighttime construction noise level threshold?

## 10.6 CONSTRUCTION VIBRATION ANALYSIS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. The operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Ground vibration levels associated with various types of construction equipment are summarized on Table 10-5. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the potential for human response (annoyance) and building damage using the following vibration assessment methods defined by the FTA. To describe the vibration impacts the FTA provides the following equation:  $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$



**TABLE 10-5: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT**

Equipment	PPV (in/sec) at 25 feet
Small bulldozer	0.003
Jackhammer	0.035
Loaded Trucks	0.076
Large bulldozer	0.089
Vibratory Roller	0.210

Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual

Table 10-6 presents the expected Project related vibration levels at the nearby receiver locations. At distances ranging from 197 to 2,435 feet from Project construction activities, construction vibration velocity levels are estimated to range from 0.000 to 0.009 PPV in/sec. Based on maximum acceptable continuous vibration threshold of 0.3 PPV in/sec), the typical Project construction vibration levels will fall below the building damage thresholds at all the noise sensitive receiver locations. Therefore, the Project-related vibration impacts are considered *less than significant* during typical construction activities at the Project site.

Moreover, the vibration levels reported at the sensitive receiver locations are unlikely to be sustained during the entire construction period but will occur rather only during the times that heavy construction equipment is operating adjacent to the Project site perimeter.

**TABLE 10-6: PROJECT CONSTRUCTION VIBRATION LEVELS**

Location <sup>1</sup>	Distance to Const. Activity (Feet) <sup>2</sup>	Typical Construction Vibration Levels PPV (in/sec) <sup>3</sup>						Thresholds PPV (in/sec) <sup>4</sup>	Thresholds Exceeded? <sup>5</sup>
		Small bulldozer	Jack- hammer	Loaded Trucks	Large bulldozer	Vibratory Roller	Highest Vibration Level		
R1	1,816'	0.000	0.000	0.000	0.000	0.000	0.000	0.3	No
R2	2,435'	0.000	0.000	0.000	0.000	0.000	0.000	0.3	No
R3	1,710'	0.000	0.000	0.000	0.000	0.000	0.000	0.3	No
R4	1,092'	0.000	0.000	0.000	0.000	0.001	0.001	0.3	No
R5	1,535'	0.000	0.000	0.000	0.000	0.000	0.000	0.3	No
R6	1,445'	0.000	0.000	0.000	0.000	0.000	0.000	0.3	No
R7	1,121'	0.000	0.000	0.000	0.000	0.001	0.001	0.3	No
R8	197'	0.000	0.002	0.003	0.004	0.009	0.009	0.3	No

<sup>1</sup> Receiver locations are shown on Exhibit 10-A.<sup>2</sup> Distance from receiver building facade to Project construction boundary (Project site boundary).<sup>3</sup> Based on the Vibration Source Levels of Construction Equipment (Table 10-5).<sup>4</sup> Caltrans Transportation and Construction Vibration Guidance Manual, April 2020, Table 19, p. 38.<sup>5</sup> Does the peak vibration exceed the acceptable vibration thresholds?

"PPV" = Peak Particle Velocity



## 11 REFERENCES

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2. **FORMA.** City of Perris Green Valley Specific Plan Amendment 2. [Online] April 23, 2023. <https://www.cityofperris.org/home/showpublisheddocument/16412/638182768144670000>.
3. **California Department of Transportation Environmental Program.** *Technical Noise Supplement - A Technical Supplement to the Traffic Noise Analysis Protocol.* Sacramento, CA : s.n., September 2013.
4. **Environmental Protection Agency Office of Noise Abatement and Control.** *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.* March 1974. EPA/ONAC 550/9/74-004.
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9. **U.S. Department of Transportation, Federal Transit Administration.** *Transit Noise and Vibration Impact Assessment Manual.* September 2018.
10. **Office of Planning and Research.** *State of California General Plan Guidelines.* October 2019.
11. **City of Menifee.** *General Plan Noise Element.* July 2015.
12. —. *Development Code, Chapter 9.215: Performance Standards.*
13. **City of Perris.** *Municipal Code, Chapter 7.34 Noise Control.*
14. **California Department of Transportation.** *Transportation and Construction Vibration Guidance Manual.* April 2020.
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20. **American National Standards Institute (ANSI).** *Specification for Sound Level Meters ANSI S1.4-2014/IEC 61672-1:2013.*
21. **U.S. Department of Transportation, Federal Highway Administration.** *FHWA Highway Traffic Noise Prediction Model.* December 1978. FHWA-RD-77-108.



22. **California Department of Transportation Environmental Program, Office of Environmental Engineering.** *Use of California Vehicle Noise Reference Energy Mean Emission Levels (Calven REMELs) in FHWA Highway Traffic Noise Prediction.* September 1995. TAN 95-03.
23. **California Department of Transportation.** *Traffic Noise Attenuation as a Function of Ground and Vegetation Final Report.* June 1995. FHWA/CA/TL-95/23.
24. **EPD Soluitons, Inc.** *Barnett and Ethanac Traffic Analysis.*
25. **U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning.** *FHWA Roadway Construction Noise Model.* January, 2006.



## 12 CERTIFICATIONS

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed Ethanac and Barnett Warehouse Project. The information contained in this noise study report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 584-3148.

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### EDUCATION

Master of Science in Civil and Environmental Engineering  
California Polytechnic State University, San Luis Obispo • December, 1993

Bachelor of Science in City and Regional Planning  
California Polytechnic State University, San Luis Obispo • June, 1992

### PROFESSIONAL REGISTRATIONS

PE – Registered Professional Traffic Engineer – TR 2537 • January, 2009  
AICP – American Institute of Certified Planners – 013011 • June, 1997–January 1, 2012  
PTP – Professional Transportation Planner • May, 2007 – May, 2013  
INCE – Institute of Noise Control Engineering • March, 2004

### PROFESSIONAL AFFILIATIONS

ASA – Acoustical Society of America  
ITE – Institute of Transportation Engineers

### PROFESSIONAL CERTIFICATIONS

Certified Acoustical Consultant – County of San Diego • March, 2018  
Certified Acoustical Consultant – County of Orange • February, 2011  
FHWA-NHI-142051 Highway Traffic Noise Certificate of Training • February, 2013



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**APPENDIX 3.1:**  
**CITY OF MENIFEE DEVELOPMENT CODE**



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## TITLE 9: PLANNING AND ZONING

### ARTICLE 4: SITE DEVELOPMENT REGULATIONS AND PERFORMANCE STANDARDS

#### Chapter 9.215 Performance Standards

##### 9.215.060 Noise Control Regulations

- A. Intent.** At certain levels, sound becomes noise and may jeopardize the health, safety or general welfare of city residents and degrade their quality of life. Pursuant to its police power, the City Council hereby declares that noise shall be regulated in the manner described herein. This chapter is intended to establish citywide standards regulating noise. This chapter is not intended to establish thresholds of significance for the purpose of any analysis required by the California Environmental Quality Act (CEQA), and no such thresholds are hereby established.
- B. General Exemptions.** Sound emanating from the following sources are exempt from the provisions of this chapter:
1. Facilities owned or operated by or for a governmental agency.
  2. Capital improvement projects of a governmental agency.
  3. The maintenance or repair of public properties.
  4. Public safety personnel in the course of executing their official duties, including, but not limited to, sworn peace officers, emergency personnel and public utility personnel. This exemption includes, without limitation, sound emanating from all equipment used by such personnel, whether stationary or mobile.
  5. Public and private schools and school-sponsored activities.
  6. Agricultural operations on land designated Agriculture in the City's General Plan, or land zoned AG (Agriculture), provided such operations are carried out in a manner consistent with accepted industry standards. This exemption includes, without limitation, sound emanating from all equipment used during such operations, whether stationary or mobile.
  7. Wind energy conversion systems (WECS), provided such systems comply with the noise provisions of the Menifee Municipal Code.
  8. Property maintenance, including, but not limited to, the operation of lawnmowers, leaf blowers, etc., provided such maintenance occurs between the hours of 7:00 a.m. and 8:00 p.m.
  9. Motor vehicles (factory equipped), other than off-highway vehicles. This exemption does not include sound emanating from motor vehicle sound systems.
  10. Heating and air conditioning equipment in proper repair.
  11. Safety, warning and alarm devices, including, but not limited to, house and car alarms, and other warning devices that are designed to protect the public health, safety and welfare.
  12. The discharge of firearms consistent with all state laws.
  13. Bars, nightclubs, cocktail lounges, cabarets, billiards/pool halls, restaurants, drive-ins and eating establishments that have a Conditional Use Permit for on-site alcohol sales and live entertainment (interior noise). Outdoor patios and similar areas shall be subject to the requirements of this chapter, unless conditioned otherwise under Conditional Use Permit review.
- C. Construction-Related Exemptions.** Exceptions may be requested from the standards set forth in Section 9.215.060 of this chapter and may be characterized as construction-related, single event or continuous events exceptions.
1. Private construction projects, with or without a Building Permit, located one-quarter of a mile or more from an inhabited dwelling.
  2. Private construction projects, with or without a building permit, located within one-quarter of a mile from an inhabited dwelling, shall be permitted Monday through Saturday, except nationally recognized holidays, 6:30 a.m. to 7:00 p.m., or specified in Section 8.01.010. There shall be no construction permitted on Sunday or nationally recognized holidays unless approval is obtained from the City Building Official or City Engineer.
  3. Construction-related exceptions. If construction occurs during off hours or exceeds noise thresholds, an application for a construction-related exception shall be made using the temporary use application provided by the Community Development Director in Chapter 9.110 of this Title. For construction activities on Sunday or nationally recognized holidays, Section 8.01.010 of this Code shall prevail.
- D. General Sound Level Standards.** No person shall create any sound, or allow the creation of any sound, on any property that causes the exterior and interior sound level on any other occupied property to exceed the sound level standards set forth in Table 9.215.060-1, Stationary Source Noise Standards.

Table 9.215.060-1 Stationary Source Noise Standards

Land Use	Interior Standards	Exterior Standards
10:00 p.m. to 7:00 a.m.	40 L <sub>eq</sub> (10-minute)	45 L <sub>eq</sub> (10-minute)
7:00 a.m. to 10:00 p.m.	55 L <sub>eq</sub> (10-minute)	65 L <sub>eq</sub> (10-minute)



Title 9: Planning and Zoning > Article 4: Site Development Regulations and Performance Standards > Chapter 9.215 Performance Standards > 9.215.060 Noise Control Regulations

Development Director in Chapter 9.110 of this title. For construction activities on Sunday or nationally recognized holidays, Section 8.01.010 of this Code shall prevail.

**D. General Sound Level Standards.** No person shall create any sound, or allow the creation of any sound, on any property that causes the exterior and interior sound level on any other occupied property to exceed the sound level standards set forth in Table 9.215.060-1, Stationary Source Noise Standards.

Table 9.215.060-1 Stationary Source Noise Standards		
Land Use	Interior Standards	Exterior Standards
10:00 p.m. to 7:00 a.m.	40 L <sub>eq</sub> (10-minute)	45 L <sub>eq</sub> (10-minute)
7:00 a.m. to 10:00 p.m.	55 L <sub>eq</sub> (10-minute)	65 L <sub>eq</sub> (10-minute)

**E. Sound Level Measurement Methodology.** Sound level measurements may be made anywhere within the boundaries of an occupied property. The actual location of a sound level measurement shall be at the discretion of the enforcement officials identified in Section 9.215.060.G. Sound level measurements shall be made with a sound level meter. Immediately before a measurement is made, the sound level meter shall be calibrated utilizing an acoustical calibrator meeting the standards of the American National Standards Institute. Following a sound level measurement, the calibration of the sound level meter shall be reverified. Sound level meters and calibration equipment shall be certified annually.

**F. Special Sound Level Measurement Methodology.** The general sound level standards set forth in Section 9.215.060.E apply to sound emanating from all sources, including the following special sound sources, and the person creating, or allowing the creation of, the sound is subject to the requirements of that section. The following special sound sources are also subject to the following additional standards; failure to comply with these standards constitutes separate violations of this chapter.

**1. Motor vehicles.**

**a. Off-highway vehicles.**

- i. No person shall operate an off-highway vehicle unless it is equipped with a USDA-qualified spark arrester and a constantly operating and properly maintained muffler. A muffler is not considered constantly operating and properly maintained if it is equipped with a cutout, bypass or similar device.
- ii. No person shall operate an off-highway vehicle unless the noise emitted by the vehicle is not more than 96 dBA if the vehicle was manufactured on or after January 1, 1986, or is not more than 101 dBA if the vehicle was manufactured before January 1, 1986. For purposes of this division, emitted noise shall be measured a distance of 20 inches from the vehicle tailpipe using test procedures established by the Society of Automotive Engineers under Standard J-1287.

**b. Sound systems.** No person shall operate a motor vehicle sound system, whether affixed to the vehicle or not, between the hours of 10:00 p.m. and 8:00 a.m. the following morning, such that the sound system is audible to the human ear inside any inhabited dwelling. No person shall operate a motor vehicle sound system, whether affixed to the vehicle or not, at any other time such that the sound system is audible to the human ear at a distance greater than 100 feet from the vehicle.

**2. Power tools and equipment.** No person shall operate any power tools or equipment as specified in Section 8.01.010, such that the power tools or equipment is audible to the human ear inside an inhabited dwelling other than a dwelling in which the power tools or equipment may be located. No person shall operate any power tools or equipment at any other time such that the power tools or equipment are audible to the human ear at a distance greater than 100 feet from the power tools or equipment.

**3. Audio equipment.** No person shall operate any audio equipment, whether portable or not, between the hours of 10:00 p.m. and 8:00 a.m. the following morning such that the equipment is audible to the human ear inside an inhabited dwelling other than a dwelling in which the equipment may be located. No person shall operate any audio equipment, whether portable or not, at any other time such that the equipment is audible to the human ear at a distance greater than 100 feet from the equipment.

**4. Sound-amplifying equipment and live music.** No person shall install, use or operate sound-amplifying equipment, or perform, or allow to be performed, live music unless such activities comply with the following requirements. To the extent that these requirements conflict with any conditions of approval attached to an underlying land use permit, these requirements shall control.

- a. Sound-amplifying equipment or live music is prohibited between the hours of 10:00 p.m. and 8:00 a.m. the following morning on Sunday through Thursday and between the hours of 11:00 p.m. and 8:00 a.m. the following morning on Friday and Saturday.
- b. Sound emanating from sound-amplifying equipment or live music at any other time shall not be audible to the human ear at a distance greater than 200 feet from the equipment or music.

**G. Duty to Cooperate.** No person shall refuse to cooperate with, or obstruct, any peace officer or code enforcement officer when he or she is engaged in the process of enforcing the provisions of this chapter. This duty to cooperate may require a person to extinguish a sound source so that it can be determined whether sound emanating from the source violates the provisions of this chapter.



**APPENDIX 3.2:**  
**CITY OF PERRIS MUNICIPAL CODE**



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## CHAPTER 7.34. - NOISE CONTROL

## Sec. 7.34.010. - Declaration of policy.

Excessive noise levels are detrimental to the health and safety of individuals. Noise is considered a public nuisance, and the city discourages unnecessary, excessive or annoying noises from all sources. Creating, maintaining, causing, or allowing to be created, caused or maintained, any noise or vibration in a manner prohibited by the provisions of the ordinance codified in this chapter is a public nuisance and shall be punishable as a misdemeanor.

(Code 1972, § 7.34.010; Ord. No. 1082, § 2(part), 2000)

## Sec. 7.34.020. - Definitions.

- (a) *General.* The following words, terms and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

*Ambient noise* means the all-encompassing noise associated with a given environment usually being composed of sounds from many sources near and far. For the purpose of this chapter, ambient noise level is the level obtained when the noise level is averaged over a period of five minutes without inclusion of noise from isolated identifiable sources at the location and time of day near that at which a comparison is to be made.

*Decibel (dB)* means an intensity unit which denotes the ratio between two quantities which are proportional to power; the number of decibels corresponding to the ratio is ten times the common logarithm of this ratio.

*Sound amplifying equipment* means any machine or device for the amplification of the human voice, music or any other sound. The term "sound amplifying equipment" does not include standard vehicle radios when used and heard only by the occupants of the vehicle in which the vehicle radio is installed. The term "sound amplifying equipment," as used in this chapter, does not include warning devices on any vehicle used only for traffic safety purposes and shall not include communications equipment used by public or private utilities when restoring utility service following a public emergency or when doing work required to protect person or property from an imminent exposure to danger.

*Sound level (noise level)* in decibels is the value of a sound measurement using the "A" weighting network of a sound level meter. Slow response of the sound level meter needle shall be used except where the sound is impulsive or rapidly varying in nature, in which case, fast response shall be used.

*Sound level meter* means an instrument, including a microphone, an amplifier, an output meter and frequency weighting networks, for the measurement of sound levels, which satisfies the pertinent requirements in American National Standards Institute's specification S1.4-1971 or the most recent revision for type S-2A general purpose sound level meters.

- (b) *Supplementary definitions of technical terms.* Definitions of technical terms not defined in this section shall be obtained from the American National Standards Institute's Acoustical Terminology S1-1971 or the most recent revision thereof.

(Code 1972, § 7.34.020; Ord. No. 1082, § 2(part), 2000)

## Sec. 7.34.030. - Measurement methods.

- (a) Sound shall be measured with a sound level meter as defined in section 7.34.020.



- (b) Unless otherwise provided, outdoor measurements shall be taken with the microphone located at any point on the property line of the noise source but no closer than five feet from any wall or vertical obstruction and three to five feet above ground level whenever possible.
- (c) Unless otherwise provided, indoor measurements shall be taken inside the structure with the microphone located at any point as follows:
  - (1) No less than three feet above floor level;
  - (2) No less than five feet from any wall or vertical obstruction; and
  - (3) Not under common possession and control with the building or portion of the building from which the sound is emanating.

(Code 1972, § 7.34.030; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.040. - Sound amplification.

No person shall amplify sound using sound amplifying equipment contrary to any of the following:

- (1) The only amplified sound permitted shall be either music or the human voice, or both.
- (2) The volume of amplified sound shall not exceed the noise levels set forth in this subsection when measured outdoors at or beyond the property line of the property from which the sound emanates.

Time Period	Maximum Noise Level
10:01 p.m.—7:00 a.m.	60 dBA
7:01 a.m.—10:00 p.m.	80 dBA

(Code 1972, § 7.34.040; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.050. - General prohibition.

- (a) It unlawful for any person to willfully make, cause or suffer, or permit to be made or caused, any loud excessive or offensive noises or sounds which unreasonably disturb the peace and quiet of any residential neighborhood or which are physically annoying to persons of ordinary sensitivity or which are so harsh, prolonged or unnatural or unusual in their use, time or place as to occasion physical discomfort to the inhabitants of the city, or any section thereof. The standards for dBA noise level in section 7.34.040 shall apply to this section. To the extent that the noise created causes the noise level at the property line to exceed the ambient noise level by more than 1.0 decibels, it shall be presumed that the noise being created also is in violation of this section.
- (b) The characteristics and conditions which should be considered in determining whether a violation of the provisions of this section exists should include, but not be limited to, the following:
  - (1) The level of the noise;
  - (2) Whether the nature of the noise is usual or unusual;



- (3) Whether the origin of the noise is natural or unnatural;
- (4) The level of the ambient noise;
- (5) The proximity of the noise to sleeping facilities;
- (6) The nature and zoning of the area from which the noise emanates and the area where it is received;
- (7) The time of day or night the noise occurs;
- (8) The duration of the noise; and
- (9) Whether the noise is recurrent, intermittent or constant.

(Code 1972, § 7.34.050; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.060. - Construction noise.

It is unlawful for any person between the hours of 7:00 p.m. of any day and 7:00 a.m. of the following day, or on a legal holiday, with the exception of Columbus Day and Washington's birthday, or on Sundays to erect, construct, demolish, excavate, alter or repair any building or structure in such a manner as to create disturbing, excessive or offensive noise. Construction activity shall not exceed 80 dBA in residential zones in the city.

(Code 1972, § 7.34.060; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.070. - Refuse vehicles and parking lot sweepers.

No person shall operate or permit to be operated a refuse compacting, processing or collection vehicle or parking lot sweeper between the hours of 7:00 p.m. to 7:00 a.m. in any residential area unless a permit has been applied for and granted by the city.

(Code 1972, § 7.34.070; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.080. - Disturbing, excessive, offensive noises; declaration of certain acts constituting.

The following activities, among others, are declared to cause loud, disturbing, excessive or offensive noises in violation of this section and are unlawful, namely:

- (1) *Horns, signaling devices, etc.* Unnecessary use or operation of horns, signaling devices or other similar devices on automobiles, motorcycles or any other vehicle.
- (2) *Radios, television sets, phonographs, loud speaking amplifiers and similar devices.* The use or operation of any sound production or reproduction device, radio receiving set, musical instrument, drums, phonograph, television set, loudspeakers, sound amplifier, or other similar machine or device for the producing or reproducing of sound, in such a manner as to disturb the peace, quiet or comfort of any reasonable person of normal sensitivity in any area of the city is prohibited. This provision shall not apply to any participant in a licensed parade or to any person who has been otherwise duly authorized by the city to engage in such conduct.
- (3) *Animals.*
  - a. The keeping or maintenance, or the permitting to be kept or maintained, upon any premises owned, occupied or controlled by any person of any animal or animals which by any frequent or long-continued noise shall cause annoyance or discomfort to a reasonable person of normal sensitiveness



in the vicinity.

- b. The noise from any such animal or animals that disturbs two or more residents residing in separate residences adjacent to any part of the property on which the subject animal or animals are kept or maintained, or three or more residents residing in separate residences in close proximity to the property on which the subject animal or animals are kept or maintained, shall be prima facie evidence of a violation of this section.
- (4) *Hospitals, schools, libraries, rest homes, long-term medical or mental care facilities.* To make loud, disturbing, excessive noises adjacent to a hospital, school, library, rest home or long-term medical or mental care facility, which noise unreasonably interferes with the workings of such institutions or which disturbs or unduly annoys occupants in said institutions.
- (5) *Playing of radios on buses and trolleys.* The operation of any radio, phonograph or tape player on an urban transit bus or trolley so as to emit noise that is audible to any other person in the vehicle is prohibited.
- (6) *Playing of radios, phonographs and other sound production or reproduction devices in public parks and public parking lots and streets adjacent thereto.* The operation of any radio, phonograph, television set or any other sound production or reproduction device in any public park or any public parking lot, or street adjacent to such park or beach, without the prior written approval of the city manager or the administrator, in such a manner that such radio, phonograph, television set or sound production or reproduction device emits a sound level exceeding those found in the table in section 7.34.040.
- (7) *Leaf blowers.*
  - a. The term "leaf blower" means any portable, hand-held or backpack, engine-powered device with a nozzle that creates a directable airstream which is capable of and intended for moving leaves and light materials.
  - b. No person shall operate a leaf blower in any residential zoned area between the hours of 7:00 p.m. and 8:00 a.m. on weekdays and 5:00 p.m. and 9:00 a.m. on weekends or on legal holidays.
  - c. No person may operate any leaf blower at a sound level in excess of 80 decibels measured at a distance of 50 feet or greater from the point of noise origin.
  - d. Leaf blowers shall be equipped with functional mufflers and an approved sound limiting device required to ensure that the leaf blower is not capable of generating a sound level exceeding any limit prescribed in this section.

(Code 1972, § 7.34.080; Ord. No. 1082, § 2(part), 2000)

#### Sec. 7.34.090. - Burglar alarms.

- (a) Audible burglar alarms for structures or motor vehicles are prohibited unless the operation of such burglar alarm can be terminated within 20 minutes of being activated.
- (b) Notwithstanding the requirements of this provision, any member of the county sheriff's department, Perris Division, shall have the right to take such steps as may be reasonable and necessary to disconnect any such alarm installed in any building, dwelling or motor vehicle at any time during the period of its activation. On or after 30 days from the effective date of the ordinance codified in this chapter, any building, dwelling or motor vehicle upon which a burglar alarm has been installed shall prominently display the telephone number at which communication may be made with the owner of such building, dwelling or motor vehicle.



(Code 1972, § 7.34.090; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.100. - Motor vehicles.

(a) Off-highway.

- (1) Except as otherwise provided for in this chapter, it shall be unlawful to operate any motor vehicle of any type on any site, other than on a public street or highway as defined in the California Vehicle Code, in any manner so as to cause noise in excess of those noise levels permitted for on-highway motor vehicles as specified in the table for "45-mile-per-hour or less speed limits" contained in section 23130 of the California Vehicle Code and as corrected for distances set forth in subsection (a)(2) of this section.
- (2) The maximum noise level as the on-highway vehicle passes may be measured at a distance of other than 50 feet from the centerline of travel, provided the measurement is further adjusted by adding algebraically the application correction as follows:

Distance (feet)	Correction (decibels)
25	-6
28	-5
32	-4
35	-3
40	-2
45	-1
50 (preferred distance)	0
56	+1
63	+2
70	+3
80	+4
90	+5



100	+6
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(b) Nothing in this section shall apply to authorized emergency vehicles when being used in emergency situations including the blowing of sirens and/or horns.

(Code 1972, § 7.34.100; Ord. No. 1082, § 2(part), 2000)



## **APPENDIX 5.1:**

### **STUDY AREA PHOTOS**



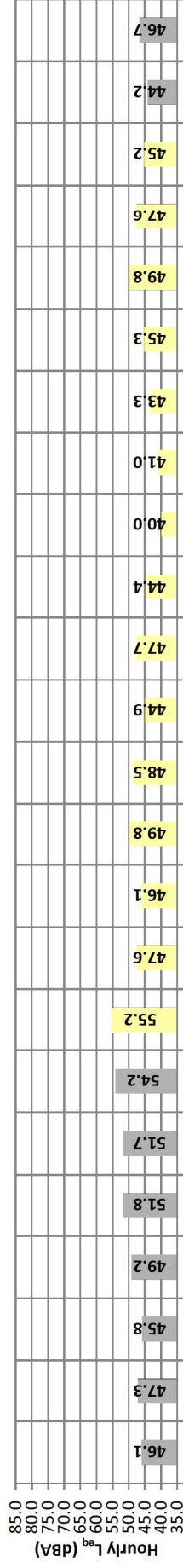
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# 24-Hour Noise Level Measurement Summary

Date: Wednesday, March 23, 2022  
Project: Ethanac and Barnett Warehouse  
Location: L1 - Located west of the Project site near single-family  
Source: residence at 26038 Hull Street.  
Meter: Piccolo II  
JN: 14775  
Analyst: A. Khan

Hourly  $L_{eq}$  dBA Readings (unadjusted)



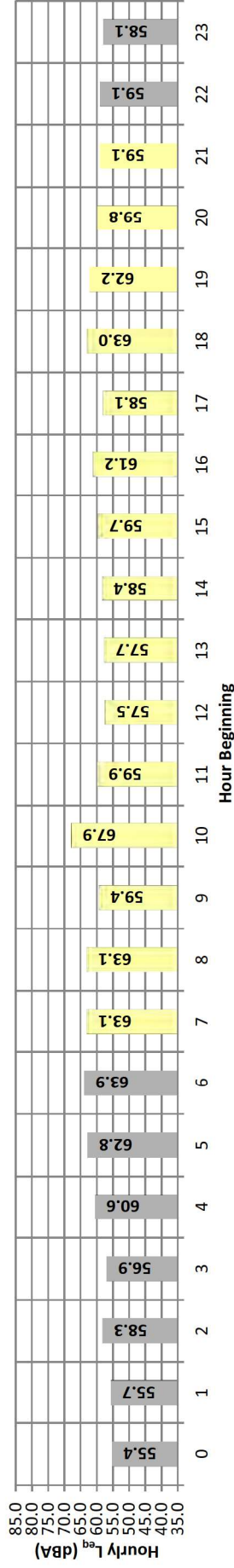
Timeframe	Hour	$L_{eq}$	$L_{max}$	$L_{min}$	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	$L_{eq}$	Adj.	Adj. $L_{eq}$
Night	0	46.1	52.0	41.8	51.8	51.5	50.2	49.6	46.5	44.7	42.6	42.3	41.9	46.1	10.0	56.1
	1	47.3	53.3	43.4	53.0	52.6	51.7	50.8	47.8	46.1	44.2	43.9	43.6	47.3	10.0	57.3
	2	45.8	49.7	43.3	49.5	49.2	48.5	48.0	46.3	45.3	43.9	43.6	43.4	45.8	10.0	55.8
	3	49.2	53.0	46.7	52.7	52.3	51.7	51.2	49.7	48.6	47.3	47.0	46.8	49.2	10.0	59.2
	4	51.8	57.7	49.0	57.3	56.5	55.3	54.5	52.2	50.8	49.6	49.4	49.1	51.8	10.0	61.8
	5	51.7	54.0	49.9	53.9	53.7	53.3	53.1	52.2	51.5	50.4	50.2	50.0	51.7	10.0	61.7
	6	54.2	57.0	52.3	56.8	56.5	55.9	55.5	54.7	54.0	52.8	52.6	52.4	54.2	10.0	64.2
Day	7	55.2	58.9	52.9	58.6	58.2	57.5	57.1	55.7	54.8	53.5	53.3	53.0	55.2	0.0	55.2
	8	47.6	51.5	45.1	51.1	50.7	50.0	49.6	48.3	47.1	45.7	45.5	45.2	47.6	0.0	47.6
	9	46.1	52.5	39.1	52.1	51.9	50.9	50.0	47.3	44.3	40.5	39.9	39.3	46.1	0.0	46.1
	10	49.8	60.0	39.5	59.5	59.2	57.2	55.0	48.4	44.9	41.0	40.5	39.7	49.8	0.0	49.8
	11	48.5	56.7	39.1	56.1	55.2	53.7	52.9	50.1	45.7	40.8	40.3	39.4	48.5	0.0	48.5
	12	44.9	52.0	38.4	51.4	50.7	49.3	48.7	46.4	42.7	39.5	39.1	38.6	44.9	0.0	44.9
	13	47.7	59.9	37.7	58.9	58.0	55.0	53.6	44.0	41.2	38.7	38.3	37.9	47.7	0.0	47.7
	14	44.4	52.3	37.2	51.8	51.3	50.2	49.6	44.1	41.3	38.4	37.9	37.4	44.4	0.0	44.4
	15	40.0	45.3	35.5	44.9	44.7	44.0	43.4	41.1	38.6	36.3	36.0	35.6	40.0	0.0	40.0
	16	41.0	46.6	35.6	46.2	45.9	44.7	44.1	42.0	40.0	36.7	36.2	35.7	41.0	0.0	41.0
	17	43.3	48.1	38.7	47.8	47.4	46.7	46.2	44.2	42.6	40.0	39.3	38.8	43.3	0.0	43.3
	18	45.3	50.6	41.3	50.2	49.8	48.8	48.3	46.0	44.5	42.3	41.9	41.5	45.3	0.0	45.3
	19	49.8	55.5	44.8	55.1	54.7	53.8	53.2	50.6	48.6	46.0	45.5	45.0	49.8	5.0	54.8
	20	47.6	53.4	42.7	52.9	52.5	51.5	50.9	48.7	46.3	43.7	43.2	42.8	47.6	5.0	52.6
	21	45.2	50.6	41.1	50.2	49.9	48.9	48.4	46.0	44.0	41.9	41.6	41.2	45.2	5.0	50.2
Night	22	44.2	48.5	41.0	48.2	47.9	47.2	46.7	45.0	43.5	41.8	41.4	41.1	44.2	10.0	54.2
	23	46.7	53.4	41.2	53.0	52.6	51.8	51.1	47.1	44.5	41.9	41.6	41.3	46.7	10.0	56.7
Timeframe	Hour	$L_{eq}$	$L_{max}$	$L_{min}$	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	$L_{eq}$ (dBA)		
Day	Min	40.0	45.3	35.5	44.9	44.7	44.0	43.4	41.1	38.6	36.3	36.0	35.6	24-Hour		
	Max	55.2	60.0	52.9	59.5	59.2	57.5	57.1	55.7	54.8	53.5	53.3	53.0	Daytime (7am-10pm)		
Energy Average		48.1	Average:		52.5	52.0	50.8	50.1	46.9	44.4	41.7	41.2	40.7	Nighttime (10pm-7am)		
Night	Min	44.2	48.5	41.0	48.2	47.9	47.2	46.7	45.0	43.5	41.8	41.4	41.1	48.8		
	Max	54.2	57.7	52.3	57.3	56.5	55.9	55.5	54.7	54.0	52.8	52.6	52.4	48.1		
Energy Average		49.8	Average:		52.9	52.5	51.7	51.2	49.1	47.7	46.0	45.8	45.5	49.8		



# 24-Hour Noise Level Measurement Summary

Date: Wednesday, March 23, 2022  
Project: Ethanac and Barnett Warehouse  
Location: L2 - Located southeast of the Project site near single-family  
Source: residence at 26515 Alta Avenue.  
Meter: Piccolo II  
JN: 14775  
Analyst: A. Khan

Hourly  $L_{eq}$  dBA Readings (unadjusted)



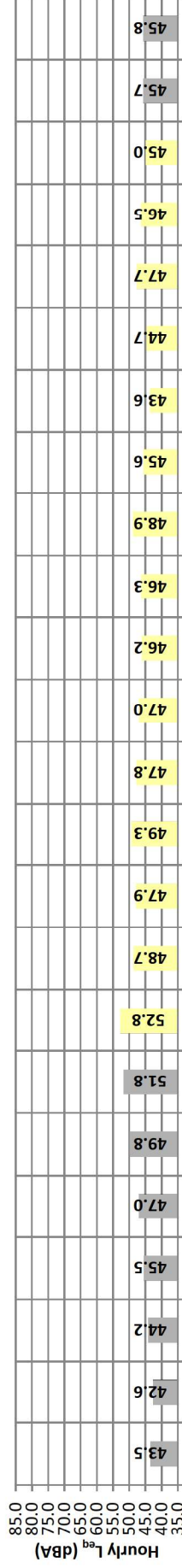
Timeframe	Hour	$L_{eq}$	$L_{max}$	$L_{min}$	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	$L_{eq}$	Adj.	Adj. $L_{eq}$
Night	0	55.4	61.9	50.6	61.6	61.0	59.5	58.4	56.0	54.2	51.7	51.2	50.7	55.4	10.0	65.4
	1	55.7	63.7	50.4	63.0	62.6	60.5	62.2	56.1	54.1	51.4	51.0	50.5	55.7	10.0	65.7
	2	58.3	70.8	50.6	70.0	68.5	64.7	62.0	55.6	53.7	51.6	51.2	50.8	58.3	10.0	68.3
	3	56.9	62.9	53.2	62.5	62.0	60.4	59.5	57.5	56.1	54.1	53.7	53.3	56.9	10.0	66.9
	4	60.6	66.6	57.2	66.2	65.9	64.5	63.3	60.9	59.6	58.0	57.7	57.4	60.6	10.0	70.6
	5	62.8	69.7	59.8	69.2	68.4	66.4	65.0	63.0	61.9	60.4	60.2	59.9	62.8	10.0	72.8
Day	6	63.9	73.9	59.2	73.4	72.9	69.4	67.0	62.5	61.4	59.9	59.7	59.3	63.9	10.0	73.9
	7	63.1	70.1	60.1	69.7	69.0	66.9	65.4	63.1	62.0	60.7	60.4	60.2	63.1	0.0	63.1
	8	63.1	75.1	56.7	74.5	73.3	69.6	66.3	60.5	59.0	57.4	57.1	56.8	63.1	0.0	63.1
	9	59.4	72.1	50.3	71.0	69.5	65.3	62.7	57.9	54.9	51.7	51.0	50.4	59.4	0.0	59.4
	10	67.9	82.6	50.2	81.8	80.4	75.3	70.6	59.3	55.6	51.8	51.2	50.4	67.9	0.0	67.9
	11	59.9	72.4	49.8	72.0	70.9	66.6	63.1	57.4	54.8	51.1	50.5	50.0	59.9	0.0	59.9
	12	57.5	68.2	49.5	67.6	66.6	63.3	61.0	56.8	54.3	51.1	50.3	49.7	57.5	0.0	57.5
	13	57.7	69.0	49.8	68.3	67.1	64.2	61.7	56.5	54.0	51.1	50.6	50.0	57.7	0.0	57.7
	14	58.4	66.9	52.2	66.4	65.5	63.4	62.1	58.6	56.5	53.5	52.9	52.3	58.4	0.0	58.4
	15	59.7	70.5	51.9	69.9	68.8	65.8	64.0	58.8	55.8	53.0	52.5	52.0	59.7	0.0	59.7
	16	61.2	74.2	50.5	73.5	72.2	68.2	65.5	57.7	54.6	51.6	51.1	50.6	61.2	0.0	61.2
	17	58.1	68.0	51.5	67.4	66.5	63.9	62.2	57.7	55.1	52.5	52.1	51.6	58.1	0.0	58.1
	18	63.0	74.7	56.5	73.6	72.3	68.9	66.7	61.7	59.5	57.3	57.0	56.6	63.0	0.0	63.0
	19	62.2	71.9	56.6	71.6	70.9	68.3	66.4	61.3	59.3	57.4	57.1	56.8	62.2	5.0	67.2
Night	20	59.8	68.2	55.5	67.6	66.7	64.3	62.7	59.8	58.2	56.3	56.0	55.6	59.8	5.0	64.8
	21	59.1	67.9	54.3	67.3	66.3	63.6	62.0	59.2	57.3	55.2	54.8	54.4	59.1	5.0	64.1
	22	59.1	67.2	53.5	66.9	66.4	65.0	63.9	58.6	56.5	54.5	54.1	53.6	59.1	10.0	69.1
		$L_{eq}$	58.1	53.6	65.4	64.6	62.5	60.9	58.4	56.6	54.5	54.1	53.7	58.1	10.0	68.1
Timeframe	Hour	$L_{eq}$	$L_{max}$	$L_{min}$	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	$L_{eq}$ (dBA)		
Day	Min	57.5	66.9	49.5	66.4	65.5	63.3	61.0	56.5	54.0	51.1	50.3	49.7	Daytime (7am-10pm)		
	Max	67.9	82.6	60.1	81.8	80.4	75.3	70.6	63.1	62.0	60.7	60.4	60.2	Nighttime (10pm-7am)		
Energy Average		61.7	Average:		70.8	69.7	66.5	64.2	59.1	56.7	54.1	53.6	53.2	24-Hour		
Night	Min	55.4	61.9	50.4	61.6	61.0	59.5	58.4	55.6	53.7	51.4	51.0	50.5	61.1 61.7 59.9		
	Max	63.9	73.9	59.8	73.4	72.9	69.4	67.0	63.0	61.9	60.4	60.2	59.9			
Energy Average		59.9	Average:		66.5	65.8	63.6	62.1	58.7	57.1	55.1	54.7	54.4			



# 24-Hour Noise Level Measurement Summary

Date: Wednesday, March 23, 2022  
Project: Ethanac and Barnett Warehouse  
Location: L3 - Located southeast of the Project site near single-family residence at 26635 Summer Sunshine Drive.  
Meter: Piccolo II  
JN: 14775  
Analyst: A. Khan

Hourly  $L_{eq}$  dBA Readings (unadjusted)



Hour Beginning

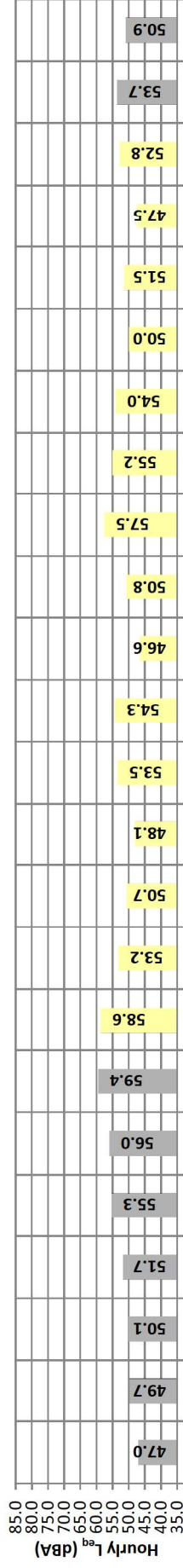
Timeframe	Hour	$L_{eq}$	$L_{max}$	$L_{min}$	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	$L_{eq}$	Adj.	Adj. $L_{eq}$
Night	0	43.5	48.2	39.1	48.0	47.8	47.2	46.4	44.3	42.6	40.2	39.7	39.2	43.5	10.0	53.5
	1	42.6	48.4	38.5	48.1	47.8	46.8	45.8	43.3	41.5	39.3	40.3	38.6	42.6	10.0	52.6
	2	44.2	52.5	39.8	51.8	50.6	48.4	47.6	44.2	42.7	40.6	40.3	39.9	44.2	10.0	54.2
	3	45.5	49.2	42.4	49.0	48.7	48.2	47.8	46.4	44.9	43.2	42.9	42.5	45.5	10.0	55.5
	4	47.0	51.5	44.3	51.1	50.7	49.9	49.2	47.6	46.4	45.0	44.7	44.4	47.0	10.0	57.0
	5	49.8	53.7	47.5	53.4	53.2	52.3	51.7	50.3	49.4	48.1	47.8	47.6	49.8	10.0	59.8
	6	51.8	57.4	48.7	56.9	56.6	55.3	54.6	52.1	50.8	49.4	49.1	48.8	51.8	10.0	61.8
Day	7	52.8	57.9	49.5	57.6	57.2	56.5	56.0	53.4	51.6	50.2	49.9	49.7	52.8	0.0	52.8
	8	48.7	55.1	45.0	54.7	54.2	52.9	51.6	49.1	47.6	45.8	45.5	45.1	48.7	0.0	48.7
	9	47.9	57.9	40.5	57.3	56.1	53.6	52.2	47.7	45.0	41.8	41.4	40.7	47.9	0.0	47.9
	10	49.3	58.0	40.5	57.3	56.5	54.6	53.6	49.8	46.7	42.1	41.4	40.7	49.3	0.0	49.3
	11	47.8	56.5	39.8	55.9	55.1	53.0	51.8	48.4	45.3	41.3	40.7	39.9	47.8	0.0	47.8
	12	47.0	56.6	38.9	56.1	55.4	53.4	51.9	46.4	43.7	40.1	39.7	39.2	47.0	0.0	47.0
	13	46.2	54.1	40.0	53.7	53.2	51.8	50.2	46.4	44.1	41.2	40.7	40.2	46.2	0.0	46.2
	14	46.3	55.3	39.6	54.8	54.4	52.6	50.8	46.1	43.6	40.8	40.5	39.8	46.3	0.0	46.3
	15	48.9	62.1	36.8	61.4	60.4	56.4	53.2	43.6	40.4	37.7	37.3	36.9	48.9	0.0	48.9
	16	45.6	57.4	37.4	56.4	54.9	51.8	49.6	44.7	41.9	38.2	37.9	37.6	45.6	0.0	45.6
	17	43.6	53.5	38.1	52.8	51.8	49.1	46.6	43.5	41.1	38.9	38.5	38.2	43.6	0.0	43.6
	18	44.7	51.8	41.2	51.2	50.5	48.8	47.6	44.8	43.5	41.9	41.6	41.4	44.7	0.0	44.7
	19	47.7	53.4	43.9	53.0	52.4	51.3	50.3	48.3	46.9	44.9	44.5	44.1	47.7	5.0	52.7
	20	46.5	50.4	43.5	50.1	49.8	48.9	48.4	47.1	46.1	44.4	44.0	43.6	46.5	5.0	51.5
	21	45.0	52.5	40.4	51.6	50.6	49.1	48.1	45.5	43.5	41.4	41.0	40.6	45.0	5.0	50.0
Night	22	45.7	49.8	42.0	49.5	49.2	48.5	48.1	46.7	45.2	43.1	42.6	42.2	45.7	10.0	55.7
	23	45.8	51.8	41.1	51.4	51.0	49.7	48.8	46.7	44.7	42.0	41.6	41.2	45.8	10.0	55.8
Timeframe	Hour	$L_{eq}$	$L_{max}$	$L_{min}$	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	$L_{eq}$ (dBA)		
Day	Min	43.6	50.4	36.8	50.1	49.8	48.8	46.6	43.5	40.4	37.7	37.3	36.9	24-Hour		
	Max	52.8	62.1	49.5	61.4	60.4	56.5	56.0	53.4	51.6	50.2	49.9	49.7	Daytime (7am-10pm)		
Energy Average		47.8	Average:		54.9	54.2	52.3	50.8	47.0	44.7	42.0	41.6	41.2	Nighttime (10pm-7am)		
Night	Min	42.6	48.2	38.5	48.0	47.8	46.8	45.8	43.3	41.5	39.3	39.0	38.6	47.6		
	Max	51.8	57.4	48.7	56.9	56.6	55.3	54.6	52.1	50.8	49.4	49.1	48.8	47.8		
Energy Average		47.2	Average:		51.0	50.6	49.6	48.9	46.8	45.4	43.4	43.1	42.7	47.2		



# 24-Hour Noise Level Measurement Summary

Date: Wednesday, March 23, 2022  
Project: Ethanac and Barnett Warehouse  
Location: L4 - Located southwest of the Project site near single-family residence at 26350 Starr Drive.  
Meter: Piccolo II  
JN: 14775  
Analyst: A. Khan

Hourly  $L_{eq}$  dBA Readings (unadjusted)



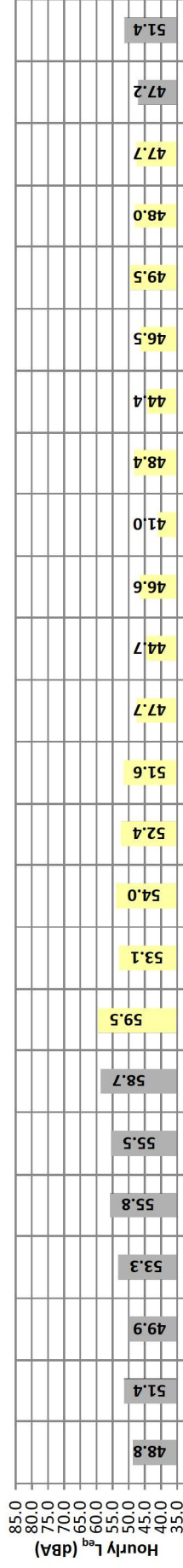
Timeframe	Hour	$L_{eq}$	$L_{max}$	$L_{min}$	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	$L_{eq}$	Adj.	Adj. $L_{eq}$
Night	0	47.0	52.7	43.7	52.3	51.8	51.0	50.1	47.5	45.9	44.3	44.1	43.8	47.0	10.0	57.0
	1	49.7	56.2	45.2	55.9	55.4	53.9	52.9	50.4	48.3	46.1	45.7	45.3	49.7	10.0	59.7
	2	50.1	58.5	45.3	58.1	57.5	55.2	53.7	49.5	48.1	46.2	45.8	45.5	50.1	10.0	60.1
	3	51.7	57.2	48.7	56.9	56.5	55.1	54.0	52.2	50.9	49.4	49.1	48.8	51.7	10.0	61.7
	4	55.3	62.3	52.0	61.9	61.3	59.1	58.0	55.4	54.2	52.6	52.4	52.1	55.3	10.0	65.3
	5	56.0	59.6	54.1	59.3	59.0	58.0	57.5	56.3	55.6	54.6	54.4	54.2	56.0	10.0	66.0
	6	59.4	69.5	54.8	69.1	68.1	65.2	63.5	58.1	56.6	55.4	55.1	54.9	59.4	10.0	69.4
Day	7	58.6	64.5	55.9	64.1	63.5	61.9	61.0	58.8	57.8	56.5	56.3	56.0	58.6	0.0	58.6
	8	53.2	58.3	50.6	57.8	57.3	56.2	55.4	53.7	52.6	51.1	50.9	50.7	53.2	0.0	53.2
	9	50.7	60.1	43.3	59.6	58.8	56.7	55.3	50.6	47.2	44.7	44.3	43.6	50.7	0.0	50.7
	10	48.1	88.8	67.5	88.3	87.7	86.0	85.1	82.5	78.7	72.2	71.0	68.3	48.1	0.0	48.1
	11	53.5	77.7	64.1	77.5	77.1	76.4	76.0	73.3	69.2	66.3	65.7	64.4	53.5	0.0	53.5
	12	54.3	62.2	43.8	61.4	60.6	58.9	58.0	55.1	52.8	47.7	45.9	44.2	54.3	0.0	54.3
	13	46.6	57.4	39.6	56.9	56.2	53.1	50.4	45.1	42.8	40.6	40.2	39.7	46.6	0.0	46.6
	14	50.8	61.5	40.6	61.2	60.8	58.7	56.3	48.5	43.6	41.5	41.1	40.7	50.8	0.0	50.8
	15	57.5	68.5	37.6	68.4	68.1	66.8	65.2	52.4	42.7	38.6	38.2	37.8	57.5	0.0	57.5
	16	55.2	67.5	39.5	66.8	66.1	63.6	60.8	49.5	43.0	40.4	40.0	39.6	55.2	0.0	55.2
	17	54.0	67.8	43.1	67.2	66.2	61.2	57.1	47.7	45.5	43.8	43.5	43.2	54.0	0.0	54.0
	18	50.0	61.0	43.8	60.4	59.4	56.9	53.4	48.3	46.7	44.8	44.5	44.0	50.0	0.0	50.0
	19	51.5	62.9	45.9	62.5	61.3	58.3	54.5	49.0	47.9	46.5	46.3	46.0	51.5	5.0	56.5
	20	47.5	53.3	44.6	52.7	52.0	50.8	50.1	48.0	46.6	45.2	45.0	44.7	47.5	5.0	52.5
	21	52.8	63.0	48.1	62.3	61.5	59.4	57.0	51.2	49.6	48.5	48.3	48.1	52.8	5.0	57.8
Night	22	53.7	55.4	52.6	55.2	55.0	54.6	54.4	53.9	53.6	52.9	52.8	52.7	53.7	10.0	63.7
	23	50.9	58.1	46.4	57.8	57.2	55.8	54.7	51.0	48.8	47.1	46.8	46.5	50.9	10.0	60.9
Timeframe	Hour	$L_{eq}$	$L_{max}$	$L_{min}$	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	$L_{eq}$ (dBA)		
Day	Min	46.6	53.3	37.6	52.7	52.0	50.8	50.1	45.1	42.7	38.6	38.2	37.8	24-Hour		
	Max	58.6	88.8	67.5	88.3	87.7	86.0	85.1	82.5	78.7	72.2	71.0	68.3	Nighttime		
Energy Average		53.6	Average:		64.5	63.8	61.7	59.7	54.2	51.1	48.6	48.1	47.4	(10pm-7am)		
Night	Min	47.0	52.7	43.7	52.3	51.8	51.0	50.1	47.5	45.9	44.3	44.1	43.8	53.8		
	Max	59.4	69.5	54.8	69.1	68.1	65.2	63.5	58.1	56.6	55.4	55.1	54.9	53.6		
Energy Average		54.2	Average:		58.5	58.0	56.4	55.4	52.7	51.3	49.8	49.6	49.3	54.2		



# 24-Hour Noise Level Measurement Summary

Date: Wednesday, March 23, 2022  
Project: Ethanac and Barnett Warehouse  
Location: L5 - Located west of the Project site near single-family  
Source: residence at 26340 Corsica Lane.  
Meter: Piccolo II  
JN: 14775  
Analyst: A. Khan

Hourly  $L_{eq}$  dBA Readings (unadjusted)



Hour Beginning

Timeframe	Hour	$L_{eq}$	$L_{max}$	$L_{min}$	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	$L_{eq}$	Adj.	Adj. $L_{eq}$
Night	0	48.8	53.6	45.2	53.3	53.0	52.3	51.8	49.5	47.7	45.9	45.6	45.3	48.8	10.0	58.8
	1	51.4	58.2	47.1	57.8	57.0	55.9	55.1	51.6	50.1	48.0	47.6	47.2	51.4	10.0	61.4
	2	49.9	55.0	46.5	54.8	54.2	53.4	52.9	50.2	49.0	47.3	47.0	46.6	49.9	10.0	59.9
	3	53.3	56.4	50.6	56.2	56.1	55.5	55.1	54.0	53.0	51.3	51.0	50.7	53.3	10.0	63.3
	4	55.8	59.8	53.2	59.5	59.3	58.6	58.0	56.4	55.3	53.8	53.5	53.3	55.8	10.0	65.8
	5	55.5	58.0	53.8	57.7	57.5	56.9	56.6	55.9	55.3	54.3	54.1	53.9	55.5	10.0	65.5
	6	58.7	61.4	56.8	61.2	61.0	60.4	60.0	59.2	58.5	57.3	57.1	56.9	58.7	10.0	68.7
Day	7	59.5	63.2	57.3	63.0	62.7	62.0	61.4	60.0	59.1	57.8	57.6	57.4	59.5	0.0	59.5
	8	53.1	65.9	48.5	65.0	62.7	56.9	53.7	51.4	50.3	49.0	48.8	48.6	53.1	0.0	53.1
	9	54.0	67.2	43.1	66.2	64.6	62.2	59.0	49.5	47.2	44.3	43.7	43.3	54.0	0.0	54.0
	10	52.4	61.8	43.0	60.8	59.7	58.0	57.0	53.2	49.3	44.4	43.8	43.3	52.4	0.0	52.4
	11	51.6	59.5	42.1	59.0	58.5	57.1	56.2	52.2	48.9	43.8	43.1	42.3	51.6	0.0	51.6
	12	47.7	54.6	41.2	53.9	53.2	51.9	51.2	48.8	46.5	42.4	42.0	41.4	47.7	0.0	47.7
	13	44.7	50.5	40.6	49.8	49.1	48.1	47.6	45.5	43.7	41.4	41.1	40.7	44.7	0.0	44.7
	14	46.6	53.7	39.9	53.3	52.7	52.1	51.5	47.2	43.6	41.1	40.6	40.1	46.6	0.0	46.6
	15	41.0	46.2	37.3	45.8	45.4	44.4	43.9	41.9	40.2	38.0	37.7	37.4	41.0	0.0	41.0
	16	48.4	64.0	38.6	61.9	59.4	53.7	48.9	44.9	42.8	39.6	39.1	38.7	48.4	0.0	48.4
	17	44.4	48.7	41.3	48.3	47.9	47.0	46.5	45.1	44.0	42.1	41.8	41.4	44.4	0.0	44.4
	18	46.5	51.3	43.3	50.7	50.2	49.5	48.9	47.2	45.8	44.1	43.8	43.4	46.5	0.0	46.5
	19	49.5	55.7	46.3	55.1	54.4	52.7	52.0	49.9	48.7	47.0	46.7	46.4	49.5	5.0	54.5
	20	48.0	53.2	44.7	52.8	52.3	51.2	50.7	48.8	47.1	45.4	45.1	44.8	48.0	5.0	53.0
	21	47.7	53.4	43.8	52.9	52.4	51.2	50.6	48.6	46.5	44.6	44.1	43.9	47.7	5.0	52.7
Night	22	47.2	51.3	44.6	51.0	50.8	50.2	49.7	47.5	46.6	45.3	45.0	44.7	47.2	10.0	57.2
	23	51.4	58.2	45.7	57.7	57.4	56.7	55.8	52.2	48.7	46.4	46.1	45.8	51.4	10.0	61.4
Timeframe	Hour	$L_{eq}$	$L_{max}$	$L_{min}$	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	$L_{eq}$ (dBA)		
Day	Min	41.0	46.2	37.3	45.8	45.4	44.4	43.9	41.9	40.2	38.0	37.7	37.4	24-Hour		
	Max	59.5	67.2	57.3	66.2	64.6	62.2	61.4	60.0	59.1	57.8	57.6	57.4	Nighttime (10pm-7am)		
Energy Average		51.6	Average:		55.9	55.0	53.2	51.9	49.0	46.9	44.3	43.9	43.5	52.6		
Night	Min	47.2	51.3	44.6	51.0	50.8	50.2	49.7	47.5	46.6	45.3	45.0	44.7	51.6		
	Max	58.7	61.4	56.8	61.2	61.0	60.4	60.0	59.2	58.5	57.3	57.1	56.9	53.8		
Energy Average		53.8	Average:		56.6	56.3	55.5	55.0	53.0	51.6	49.9	49.7	49.4	52.6		



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**APPENDIX 5.2:**

**NOISE LEVEL MEASUREMENT WORKSHEETS**



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## JN: 14775 Study Area Photos

L1\_E

33, 44' 28.390000"117, 12' 4.110000"



L1\_N

33, 44' 28.060000"117, 12' 4.000000"



L1\_S

33, 44' 28.220000"117, 12' 4.050000"



L1\_W

33, 44' 28.430000"117, 12' 4.080000"



L2\_E

33, 44' 8.320000"117, 11' 12.890000"



L2\_N

33, 44' 8.390000"117, 11' 12.940000"





## JN: 14775 Study Area Photos

L2\_S

33, 44' 8.360000"117, 11' 12.890000"



L2\_W

33, 44' 8.300000"117, 11' 12.890000"



L3\_E

33, 44' 2.870000"117, 11' 34.670000"



L3\_N

33, 44' 2.860000"117, 11' 34.720000"



L3\_S

33, 44' 2.840000"117, 11' 34.670000"



L3\_W

33, 44' 2.880000"117, 11' 34.670000"





## JN: 14775 Study Area Photos

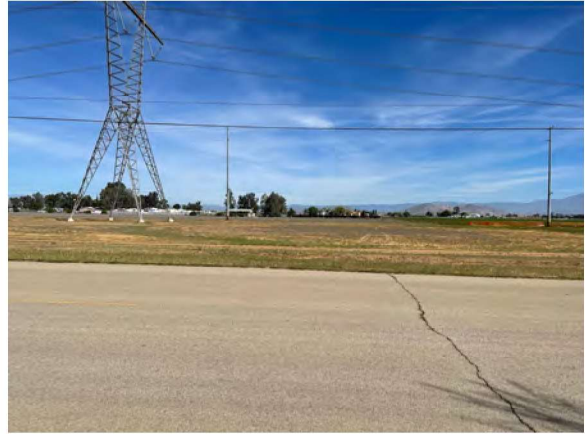
L4\_E

33, 44' 8.460000"117, 12' 0.400000"



L4\_N

33, 44' 8.410000"117, 12' 0.210000"



L4\_S

33, 44' 8.470000"117, 12' 0.400000"



L4\_W

33, 44' 8.500000"117, 12' 0.460000"



L5\_E

33, 44' 20.050000"117, 12' 0.950000"



L5\_N

33, 44' 20.060000"117, 12' 0.950000"





## JN: 14775 Study Area Photos

L5\_S

33, 44' 20.050000"117, 12' 0.950000"



L5\_W

33, 44' 20.050000"117, 12' 0.980000"





**APPENDIX 7.1:**

**OFF-SITE TRAFFIC NOISE CONTOURS**



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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Murrieta Rd. Road Segment: n/o Ethanac Rd.					Project Name: Barnett and Ethanac Job Number: 14775				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 3,350 vehicles Peak Hour Percentage: 10.00% Peak Hour Volume: 335 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 45 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					Vehicle Type	Day	Evening	Night	Daily
					Autos: 75.6% 14.0% 10.5% 97.42% Medium Trucks: 48.9% 2.2% 48.9% 1.84% Heavy Trucks: 47.3% 5.4% 47.3% 0.74%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004      Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 44.931 Medium Trucks: 44.733 Heavy Trucks: 44.752				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees									
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-6.70	0.59	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-23.94	0.62	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-27.80	0.62	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	61.2	59.1	57.8	51.8	60.2	60.9			
Medium Trucks:	54.9	51.0	43.5	52.3	58.5	58.5			
Heavy Trucks:	55.8	51.7	48.3	53.0	59.2	59.3			
Vehicle Noise:	63.0	60.4	58.4	57.2	64.1	64.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			20	44	94	203			
CNEL:			21	46	99	213			

Thursday, October 6, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)													
Scenario: E+P Road Name: Murrieta Rd. Road Segment: n/o Ethanac Rd.					Project Name: Barnett and Ethanac Job Number: 14775								
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS								
Highway Data					Site Conditions (Hard = 10, Soft = 15)								
Average Daily Traffic (Adt): 3,368 vehicles Peak Hour Percentage: 10.00% Peak Hour Volume: 337 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 45 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15								
Site Data  Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Vehicle Mix								
					Vehicle Type					Day	Evening	Night	Daily
					Autos:					75.6%	14.0%	10.5%	97.43%
					Medium Trucks:					48.9%	2.2%	48.9%	1.83%
					Heavy Trucks:					47.3%	5.4%	47.3%	0.74%
					Noise Source Elevations (in feet)								
					Autos:					0.000			
Medium Trucks:					2.297								
Heavy Trucks:					8.004								
					Grade Adjustment: 0.0								
					Lane Equivalent Distance (in feet)								
					Autos: 44.931								
					Medium Trucks: 44.733								
					Heavy Trucks: 44.752								
FHWA Noise Model Calculations													
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten						
Autos:	68.46	-6.68	0.59	-1.20	-4.65	0.000	0.000						
Medium Trucks:	79.45	-23.94	0.62	-1.20	-4.87	0.000	0.000						
Heavy Trucks:	84.25	-27.80	0.62	-1.20	-5.43	0.000	0.000						
Unmitigated Noise Levels (without Topo and barrier attenuation)													
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL							
Autos:	61.2	59.2	57.9	51.8	60.3	60.9							
Medium Trucks:	54.9	51.0	43.5	52.3	58.5	58.5							
Heavy Trucks:	55.8	51.7	48.3	53.0	59.2	59.3							
Vehicle Noise:	63.0	60.4	58.5	57.2	64.1	64.4							
Centerline Distance to Noise Contour (in feet)													
			70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:			20	44	94	203							
CNEL:			21	46	99	213							

Thursday, October 6, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Murrieta Rd. Road Segment: n/o Ethanac Rd.					Project Name: Barnett and Ethanac Job Number: 14775				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 3,540 vehicles Peak Hour Percentage: 10.00% Peak Hour Volume: 354 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 45 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
					Autos: 75.6% 14.0% 10.5% 97.42% Medium Trucks: 48.9% 2.2% 48.9% 1.84% Heavy Trucks: 47.3% 5.4% 47.3% 0.74%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 44.931 Medium Trucks: 44.733 Heavy Trucks: 44.752				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-6.46	0.59	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-23.70	0.62	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-27.66	0.62	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	61.4	59.4	58.1	52.1	60.5	61.1			
Medium Trucks:	55.2	51.3	43.8	52.5	58.7	58.7			
Heavy Trucks:	56.0	52.0	48.6	53.2	59.4	59.5			
Vehicle Noise:	63.2	60.6	58.7	57.4	64.4	64.7			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			21	45	98	211			
CNEL:			22	48	102	221			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYCP Road Name: Murrieta Rd. Road Segment: n/o Ethanac Rd.					Project Name: Barnett and Ethanac Job Number: 14775				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 3,558 vehicles					Autos: 15				
Peak Hour Percentage: 10.00%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 356 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 45 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 75.6% 14.0% 10.5% 97.43%				
					Medium Trucks: 48.9% 2.2% 48.9% 1.83%				
					Heavy Trucks: 47.3% 5.4% 47.3% 0.74%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Lane Equivalent Distance (in feet)				
					Autos: 44.931				
					Medium Trucks: 44.733				
					Heavy Trucks: 44.752				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-6.44	0.59	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-23.70	0.62	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-27.66	0.62	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	61.4	59.4	58.1	52.1	60.5	61.1			
Medium Trucks:	55.2	51.3	43.8	52.5	58.7	58.7			
Heavy Trucks:	56.0	52.0	48.6	53.2	59.4	59.5			
Vehicle Noise:	63.3	60.7	58.7	57.4	64.4	64.7			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				21	45	98	211		
CNEL:				22	48	103	221		



FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Murrieta Rd. Road Segment: s/o Ethanac Rd.					Project Name: Barnett and Ethanac Job Number: 14775				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 7,650 vehicles Peak Hour Percentage: 10.00% Peak Hour Volume: 765 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 45 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
					Autos: 75.6% 14.0% 10.5% 97.42% Medium Trucks: 48.9% 2.2% 48.9% 1.84% Heavy Trucks: 47.3% 5.4% 47.3% 0.74%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 44.931 Medium Trucks: 44.733 Heavy Trucks: 44.752				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-3.11	0.59	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-20.35	0.62	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-24.31	0.62	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	64.7	62.7	61.4	55.4	63.8	64.5			
Medium Trucks:	58.5	54.6	47.1	55.9	62.0	62.1			
Heavy Trucks:	59.4	55.3	51.9	56.6	62.8	62.9			
Vehicle Noise:	66.6	64.0	62.0	60.7	67.7	68.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			35	76	163	352			
CNEL:			37	79	171	369			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Murrieta Rd. Road Segment: s/o Ethanac Rd.					Project Name: Barnett and Ethanac Job Number: 14775				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 7,705 vehicles Peak Hour Percentage: 10.00% Peak Hour Volume: 771 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 45 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data  Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Vehicle Mix				
					Vehicle Type      Day      Evening      Night      Daily				
					Autos: 75.6%    14.0%    10.5%    97.44%				
					Medium Trucks: 48.9%    2.2%    48.9%    1.83%				
					Heavy Trucks: 47.3%    5.4%    47.3%    0.73%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004      Grade Adjustment: 0.0				
Lane Equivalent Distance (in feet)					Autos: 44.931				
					Medium Trucks: 44.733				
					Heavy Trucks: 44.752				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-3.08	0.59	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-20.35	0.62	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-24.31	0.62	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	64.8	62.8	61.4	55.4	63.9	64.5			
Medium Trucks:	58.5	54.6	47.1	55.9	62.0	62.1			
Heavy Trucks:	59.4	55.3	51.9	56.6	62.8	62.9			
Vehicle Noise:	66.6	64.0	62.0	60.8	67.7	68.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			35	76	164	353			
CNEL:			37	80	172	370			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Murrieta Rd. Road Segment: s/o Ethanac Rd.					Project Name: Barnett and Ethanac Job Number: 14775				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 13,450 vehicles Peak Hour Percentage: 10.00% Peak Hour Volume: 1,345 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 45 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
					Autos: 75.6% 14.0% 10.5% 97.42% Medium Trucks: 48.9% 2.2% 48.9% 1.84% Heavy Trucks: 47.3% 5.4% 47.3% 0.74%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 44.931 Medium Trucks: 44.733 Heavy Trucks: 44.752				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-0.66	0.59	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-17.90	0.62	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-21.86	0.62	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.2	65.2	63.9	57.9	66.3	66.9			
Medium Trucks:	61.0	57.1	49.6	58.3	64.5	64.5			
Heavy Trucks:	61.8	57.8	54.4	59.0	65.2	65.3			
Vehicle Noise:	69.0	66.4	64.5	63.2	70.2	70.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			51	110	238	513			
CNEL:			54	116	249	537			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYCP Road Name: Murrieta Rd. Road Segment: s/o Ethanac Rd.					Project Name: Barnett and Ethanac Job Number: 14775				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
<b>Highway Data</b>					<b>Site Conditions (Hard = 10, Soft = 15)</b>				
Average Daily Traffic (Adt): 13,505 vehicles Peak Hour Percentage: 10.00% Peak Hour Volume: 1,351 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 45 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
<b>Site Data</b>  Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					<b>Vehicle Mix</b>				
					VehicleType Day Evening Night Daily				
					Autos: 75.6% 14.0% 10.5% 97.43% Medium Trucks: 48.9% 2.2% 48.9% 1.83% Heavy Trucks: 47.3% 5.4% 47.3% 0.74%				
					<b>Noise Source Elevations (in feet)</b>				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					<b>Lane Equivalent Distance (in feet)</b>				
					Autos: 44.931 Medium Trucks: 44.733 Heavy Trucks: 44.752				
<b>FHWA Noise Model Calculations</b>									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-0.65	0.59	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-17.90	0.62	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-21.86	0.62	-1.20	-5.43	0.000	0.000		
<b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.2	65.2	63.9	57.9	66.3	66.9			
Medium Trucks:	61.0	57.1	49.6	58.3	64.5	64.5			
Heavy Trucks:	61.8	57.8	54.4	59.0	65.2	65.3			
Vehicle Noise:	69.0	66.5	64.5	63.2	70.2	70.5			
<b>Centerline Distance to Noise Contour (in feet)</b>									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				51	111	238	513		
CNEL:				54	116	250	538		



FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Barnett Rd. Road Segment: s/o Ethanac Rd.				Project Name: Barnett and Ethanac Job Number: 14775					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 2,120 vehicles Peak Hour Percentage: 10.00% Peak Hour Volume: 212 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 45 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data  Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
				Autos: 75.6% 14.0% 10.5% 97.42% Medium Trucks: 48.9% 2.2% 48.9% 1.84% Heavy Trucks: 47.3% 5.4% 47.3% 0.74%					
				Noise Source Elevations (in feet)					
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0					
				Lane Equivalent Distance (in feet)					
				Autos: 44.931 Medium Trucks: 44.733 Heavy Trucks: 44.752					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-8.69	0.59	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-25.93	0.62	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-20.88	0.62	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	59.2	57.2	55.8	49.8	58.3	58.9			
Medium Trucks:	52.9	49.0	41.5	50.3	56.5	56.5			
Heavy Trucks:	53.8	49.7	46.3	51.0	57.2	57.3			
Vehicle Noise:	61.0	58.4	56.4	55.2	62.1	62.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			15	32	69	150			
CNEL:			16	34	73	157			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Barnett Rd. Road Segment: s/o Ethanac Rd.				Project Name: Barnett and Ethanac Job Number: 14775					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 2,517 vehicles				Autos: 15					
Peak Hour Percentage: 10.00%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 252 vehicles				Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 45 mph				Vehicle Mix					
Near/Far Lane Distance: 45 feet				Vehicle Type	Day	Evening	Night	Daily	
Site Data				Autos: 75.6% 14.0% 10.5% 92.30%					
				Medium Trucks: 48.9% 2.2% 48.9% 2.49%					
				Heavy Trucks: 47.3% 5.4% 47.3% 5.21%					
Barrier Height: 0.0 feet				Noise Source Elevations (in feet)					
Barrier Type (0-Wall, 1-Berm): 0.0				Autos: 0.000					
Centerline Dist. to Barrier: 50.0 feet				Medium Trucks: 2.297					
Centerline Dist. to Observer: 50.0 feet				Heavy Trucks: 8.004 Grade Adjustment: 0.0					
Barrier Distance to Observer: 0.0 feet				Lane Equivalent Distance (in feet)					
Observer Height (Above Pad): 5.0 feet				Autos: 44.931					
Pad Elevation: 0.0 feet				Medium Trucks: 44.733					
Road Elevation: 0.0 feet				Heavy Trucks: 44.752					
Road Grade: 0.0%									
Left View: -90.0 degrees									
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-8.18	0.59	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-23.87	0.62	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-20.66	0.62	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	59.7	57.7	56.4	50.3	58.8	59.4			
Medium Trucks:	55.0	51.1	43.6	52.4	58.5	58.6			
Heavy Trucks:	63.0	59.0	55.6	60.2	66.4	66.5			
Vehicle Noise:	65.1	61.8	59.1	61.2	67.7	67.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			35	75	162	349			
CNEL:			36	77	166	358			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Barnett Rd. Road Segment: s/o Ethanac Rd.				Project Name: Barnett and Ethanac Job Number: 14775					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		2,210 vehicles		Autos:		15			
Peak Hour Percentage:		10.00%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		221 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		45 mph		Vehicle Mix					
Near/Far Lane Distance:		45 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		75.6%	14.0%	10.5%	97.42%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		48.9%	2.2%	48.9%	1.84%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		47.3%	5.4%	47.3%	0.74%
Centerline Dist. to Observer:		50.0 feet		Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet							
Observer Height (Above Pad):		5.0 feet		Autos:		0.000			
Pad Elevation:		0.0 feet		Medium Trucks:		2.297			
Road Elevation:		0.0 feet		Heavy Trucks:		8.004		Grade Adjustment: 0.0	
Road Grade:		0.0%		Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees							
Right View:		90.0 degrees		Autos:		44.931			
				Medium Trucks:		44.733			
				Heavy Trucks:		44.752			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-8.51	0.59	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-25.75	0.62	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-29.70	0.62	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	59.3	57.3	56.0	50.0	58.4	59.1			
Medium Trucks:	53.1	49.2	41.7	50.5	56.6	56.7			
Heavy Trucks:	54.0	49.9	46.5	51.2	57.4	57.5			
Vehicle Noise:	61.2	58.6	56.6	55.4	62.3	62.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			15	33	71	154			
CNEL:			16	35	75	161			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYCP Road Name: Barnett Rd. Road Segment: s/o Ethanac Rd.				Project Name: Barnett and Ethanac Job Number: 14775					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>					
Average Daily Traffic (Adt): 2,607 vehicles Peak Hour Percentage: 10.00% Peak Hour Volume: 261 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 45 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
<b>Site Data</b>				<b>Vehicle Mix</b>					
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				VehicleType	Day	Evening	Night	Daily	
				Autos: 75.6% 14.0% 10.5% 92.48% Medium Trucks: 48.9% 2.2% 48.9% 2.47% Heavy Trucks: 47.3% 5.4% 47.3% 5.05%					
				<b>Noise Source Elevations (in feet)</b>					
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0					
				<b>Lane Equivalent Distance (in feet)</b>					
				Autos: 44.931 Medium Trucks: 44.733 Heavy Trucks: 44.752					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-8.02	0.59	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-23.76	0.62	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-20.64	0.62	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	59.8	57.8	56.5	50.5	58.9	59.5			
Medium Trucks:	55.1	51.2	43.7	52.5	58.6	58.7			
Heavy Trucks:	63.0	59.0	55.6	60.2	66.4	66.5			
Vehicle Noise:	65.2	61.8	59.2	61.3	67.7	67.9			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				35	76	163	352		
CNEL:				36	78	168	361		



FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Ethanac Rd. Road Segment: w/o Murrieta Rd.				Project Name: Barnett and Ethanac Job Number: 14775					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 13,040 vehicles Peak Hour Percentage: 10.00% Peak Hour Volume: 1,304 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 78 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		75.6%	14.0%	10.5%	97.42%
				Medium Trucks:		48.9%	2.2%	48.9%	1.84%
				Heavy Trucks:		47.3%	5.4%	47.3%	0.74%
				Noise Source Elevations (in feet)					
				Autos:		0.000			
				Medium Trucks:		2.297			
				Heavy Trucks:		8.004			
				Grade Adjustment:		0.0			
				Lane Equivalent Distance (in feet)					
				Autos:		36.235			
				Medium Trucks:		35.990			
				Heavy Trucks:		36.014			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	-1.67	1.99	-1.20	-4.66	0.000	0.000		
Medium Trucks:	82.40	-18.91	2.04	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	86.40	-22.86	2.03	-1.20	-5.40	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.9	68.9	67.6	61.6	70.0	70.6			
Medium Trucks:	64.3	60.4	52.9	61.7	67.9	67.9			
Heavy Trucks:	64.4	60.3	56.9	61.6	67.8	67.9			
Vehicle Noise:	72.5	70.0	68.1	66.4	73.4	73.8			
Centerline Distance to Noise Contour (in feet)									
	70 dBA		65 dBA		60 dBA		55 dBA		
Ldn:	90		194		417		898		
CNEL:	94		204		439		945		

Thursday, October 6, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Ethanac Rd. Road Segment: w/o Murrieta Rd.				Project Name: Barnett and Ethanac Job Number: 14775					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 13,047 vehicles Peak Hour Percentage: 10.00% Peak Hour Volume: 1,305 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 78 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 53.0 feet Centerline Dist. to Observer: 53.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 75.6% 14.0% 10.5% 97.42% Medium Trucks: 48.9% 2.2% 48.9% 1.84% Heavy Trucks: 47.3% 5.4% 47.3% 0.74%					
				Noise Source Elevations (in feet)					
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0					
				Lane Equivalent Distance (in feet)					
				Autos: 36.235 Medium Trucks: 35.990 Heavy Trucks: 36.014					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	-1.67	1.99	-1.20	-4.66	0.000	0.000		
Medium Trucks:	82.40	-18.91	2.04	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	86.40	-22.86	2.03	-1.20	-5.40	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.9	68.9	67.6	61.6	70.0	70.6			
Medium Trucks:	64.3	60.4	52.9	61.7	67.9	67.9			
Heavy Trucks:	64.4	60.3	56.9	61.6	67.8	67.9			
Vehicle Noise:	72.5	70.0	68.1	66.4	73.4	73.8			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				90	194	417	899		
CNEL:				95	204	439	945		

Thursday, October 6, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Ethanac Rd. Road Segment: w/o Murrieta Rd.				Project Name: Barnett and Ethanac Job Number: 14775					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 26,040 vehicles Peak Hour Percentage: 10.00% Peak Hour Volume: 2,604 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 78 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 53.0 feet Centerline Dist. to Observer: 53.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				VehicleType	Day	Evening	Night	Daily	
				Autos: 75.6% 14.0% 10.5% 97.42% Medium Trucks: 48.9% 2.2% 48.9% 1.84% Heavy Trucks: 47.3% 5.4% 47.3% 0.74%					
				Noise Source Elevations (in feet)					
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0					
				Lane Equivalent Distance (in feet)					
				Autos: 36.235 Medium Trucks: 35.990 Heavy Trucks: 36.014					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	1.33	1.99	-1.20	-4.66	0.000	0.000		
Medium Trucks:	82.40	-15.90	2.04	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	86.40	-19.86	2.03	-1.20	-5.40	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	73.9	71.9	70.6	64.6	73.0	73.6			
Medium Trucks:	67.3	63.4	55.9	64.7	70.9	70.9			
Heavy Trucks:	67.4	63.3	59.9	64.6	70.8	70.9			
Vehicle Noise:	75.5	73.0	71.1	69.4	76.4	76.8			
Centerline Distance to Noise Contour (in feet)									
	70 dBA		65 dBA		60 dBA		55 dBA		
Ldn:	142		307		661		1,425		
CNEL:	150		323		696		1,498		

Thursday, October 6, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYCP Road Name: Ethanac Rd. Road Segment: w/o Murrieta Rd.				Project Name: Barnett and Ethanac Job Number: 14775					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>					
Average Daily Traffic (Adt): 26,047 vehicles Peak Hour Percentage: 10.00% Peak Hour Volume: 2,605 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 78 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
<b>Site Data</b>				<b>Vehicle Mix</b>					
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 53.0 feet Centerline Dist. to Observer: 53.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				VehicleType	Day	Evening	Night	Daily	
				Autos: 75.6% 14.0% 10.5% 97.42% Medium Trucks: 48.9% 2.2% 48.9% 1.84% Heavy Trucks: 47.3% 5.4% 47.3% 0.74%					
				<b>Noise Source Elevations (in feet)</b>					
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004      Grade Adjustment: 0.0					
				<b>Lane Equivalent Distance (in feet)</b>					
				Autos: 36.235 Medium Trucks: 35.990 Heavy Trucks: 36.014					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	1.34	1.99	-1.20	-4.66	0.000	0.000		
Medium Trucks:	82.40	-15.90	2.04	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	86.40	-19.86	2.03	-1.20	-5.40	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	73.9	71.9	70.6	64.6	73.0	73.6			
Medium Trucks:	67.3	63.4	55.9	64.7	70.9	70.9			
Heavy Trucks:	67.4	63.3	59.9	64.6	70.8	70.9			
Vehicle Noise:	75.5	73.0	71.1	69.4	76.4	76.8			
Centerline Distance to Noise Contour (in feet)									
	70 dBA	65 dBA	60 dBA	55 dBA					
Ldn:	142	307	661	1,425					
CNEL:	150	323	696	1,499					

Thursday, October 6, 2022



FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Ethanac Rd. Road Segment: e/o Murrieta Rd.				Project Name: Barnett and Ethanac Job Number: 14775					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 14,860 vehicles Peak Hour Percentage: 10.00% Peak Hour Volume: 1,486 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 78 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
				Autos: 75.6% 14.0% 10.5% 97.42%					
				Medium Trucks: 48.9% 2.2% 48.9% 1.84%					
				Heavy Trucks: 47.3% 5.4% 47.3% 0.74%					
				Noise Source Elevations (in feet)					
				Autos: 0.000					
				Medium Trucks: 2.297					
				Heavy Trucks: 8.004      Grade Adjustment: 0.0					
				Lane Equivalent Distance (in feet)					
				Autos: 36.235					
				Medium Trucks: 35.990					
				Heavy Trucks: 36.014					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	-1.10	1.99	-1.20	-4.66	0.000	0.000		
Medium Trucks:	82.40	-18.34	2.04	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	86.40	-22.30	2.03	-1.20	-5.40	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	71.5	69.5	68.2	62.1	70.6	71.2			
Medium Trucks:	64.9	61.0	53.5	62.3	68.4	68.5			
Heavy Trucks:	64.9	60.9	57.5	62.1	68.3	68.4			
Vehicle Noise:	73.1	70.5	68.6	66.9	74.0	74.3			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				98	211	455	989		
CNEL:				103	222	479	1,031		

Thursday, October 6, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Ethanac Rd. Road Segment: e/o Murrieta Rd.				Project Name: Barnett and Ethanac Job Number: 14775					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 14,941 vehicles Peak Hour Percentage: 10.00% Peak Hour Volume: 1,494 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 78 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 53.0 feet Centerline Dist. to Observer: 53.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				VehicleType	Day	Evening	Night	Daily	
				Autos: 75.6% 14.0% 10.5% 97.43% Medium Trucks: 48.9% 2.2% 48.9% 1.83% Heavy Trucks: 47.3% 5.4% 47.3% 0.74%					
				Noise Source Elevations (in feet)					
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0					
				Lane Equivalent Distance (in feet)					
				Autos: 36.235 Medium Trucks: 35.990 Heavy Trucks: 36.014					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	-1.08	1.99	-1.20	-4.66	0.000	0.000		
Medium Trucks:	82.40	-18.34	2.04	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	86.40	-22.30	2.03	-1.20	-5.40	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	71.5	69.5	68.2	62.2	70.6	71.2			
Medium Trucks:	64.9	61.0	53.5	62.3	68.4	68.5			
Heavy Trucks:	64.9	60.9	57.5	62.1	68.3	68.4			
Vehicle Noise:	73.1	70.6	68.7	67.0	74.0	74.3			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				98	217	456	987		
CNEL:				103	223	479	1,033		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)											
Scenario: OYC Road Name: Ethanac Rd. Road Segment: elo Murrieta Rd.				Project Name: Barnett and Ethanac Job Number: 14775							
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS							
Highway Data				Site Conditions (Hard = 10, Soft = 15)							
Average Daily Traffic (Adt): 32,870 vehicles Peak Hour Percentage: 10.00% Peak Hour Volume: 3,287 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 78 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15							
Site Data  Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 53.0 feet Centerline Dist. to Observer: 53.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Vehicle Mix							
				VehicleType	Day	Evening	Night	Daily			
				Autos: 75.6% 14.0% 10.5% 97.42%							
				Medium Trucks: 48.9% 2.2% 48.9% 1.84%							
				Heavy Trucks: 47.3% 5.4% 47.3% 0.74%							
				Noise Source Elevations (in feet)							
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0							
				Lane Equivalent Distance (in feet)							
				Autos: 36.235 Medium Trucks: 35.990 Heavy Trucks: 36.014							
FHWA Noise Model Calculations											
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten				
Autos:	71.78	2.35	1.99	-1.20	-4.66	0.000	0.000				
Medium Trucks:	82.40	-14.89	2.04	-1.20	-4.87	0.000	0.000				
Heavy Trucks:	86.40	-18.85	2.03	-1.20	-5.40	0.000	0.000				
Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL					
Autos:	74.9	72.9	71.6	65.6	74.0	74.6					
Medium Trucks:	68.3	64.5	56.9	65.7	71.9	71.9					
Heavy Trucks:	68.4	64.3	60.9	65.6	71.8	71.9					
Vehicle Noise:	76.5	74.0	72.1	70.4	77.5	77.8					
Centerline Distance to Noise Contour (in feet)											
			70 dBA	65 dBA	60 dBA	55 dBA					
Ldn:			166	359	772	1,664					
CNEL:			175	377	812	1,750					

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYCP Road Name: Ethanac Rd. Road Segment: e/o Murrieta Rd.				Project Name: Barnett and Ethanac Job Number: 14775					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 32,951 vehicles Peak Hour Percentage: 10.00% Peak Hour Volume: 3,295 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 78 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 53.0 feet Centerline Dist. to Observer: 53.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 75.6% 14.0% 10.5% 97.43% Medium Trucks: 48.9% 2.2% 48.9% 1.84% Heavy Trucks: 47.3% 5.4% 47.3% 0.74%					
				Noise Source Elevations (in feet)					
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0					
				Lane Equivalent Distance (in feet)					
				Autos: 36.235 Medium Trucks: 35.990 Heavy Trucks: 36.014					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	2.36	1.99	-1.20	-4.66	0.000	0.000		
Medium Trucks:	82.40	-14.89	2.04	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	86.40	-18.85	2.03	-1.20	-5.40	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:	74.9	72.9	71.6	65.6	74.0		74.6		
Medium Trucks:	68.3	64.5	56.9	65.7	71.9		71.9		
Heavy Trucks:	68.4	64.3	60.9	65.6	71.8		71.9		
Vehicle Noise:	76.5	74.0	72.1	70.4	77.5		77.8		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				167	359	773	1,665		
CNEL:				175	377	813	1,752		



FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Ethanac Rd. Road Segment: e/o Barnett Rd.				Project Name: Barnett and Ethanac Job Number: 14775					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 14,490 vehicles Peak Hour Percentage: 10.00% Peak Hour Volume: 1,449 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 78 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data  Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 53.0 feet Centerline Dist. to Observer: 53.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Vehicle Mix					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		75.6%	14.0%	10.5%	97.42%
				Medium Trucks:		48.9%	2.2%	48.9%	1.84%
				Heavy Trucks:		47.3%	5.4%	47.3%	0.74%
				Noise Source Elevations (in feet)					
				Autos:		0.000			
				Medium Trucks:		2.297			
				Heavy Trucks:		8.004			
				Grade Adjustment:		0.0			
				Lane Equivalent Distance (in feet)					
				Autos:		36.235			
				Medium Trucks:		35.990			
				Heavy Trucks:		36.014			

FHWA Noise Model Calculations							
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-1.21	1.99	-1.20	-4.66	0.000	0.000
Medium Trucks:	82.40	-18.45	2.04	-1.20	-4.87	0.000	0.000
Heavy Trucks:	86.40	-22.41	2.03	-1.20	-5.40	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	71.4	69.4	68.0	62.0	70.4	71.1	
Medium Trucks:	64.8	60.9	53.4	62.1	68.3	68.4	
Heavy Trucks:	64.8	60.8	57.4	62.0	68.2	68.3	
Vehicle Noise:	73.0	70.4	68.5	66.8	73.9	74.2	
Centerline Distance to Noise Contour (in feet)							
				70 dBA	65 dBA	60 dBA	55 dBA
Ldn:				96	70R	447	964
CNEL:				101	218	471	1,014

Thursday, October 6, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Ethanac Rd. Road Segment: e/o Barnett Rd.				Project Name: Barnett and Ethanac Job Number: 14775					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 14,905 vehicles Peak Hour Percentage: 10.00% Peak Hour Volume: 1,491 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 78 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data  Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 53.0 feet Centerline Dist. to Observer: 53.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Vehicle Mix					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		75.6%	14.0%	10.5%	96.56%
				Medium Trucks:		48.9%	2.2%	48.9%	1.95%
Heavy Trucks:		47.3%	5.4%	47.3%	1.49%				
				Noise Source Elevations (in feet)					
		Autos:		0.000					
		Medium Trucks:		2.297					
		Heavy Trucks:		8.004		Grade Adjustment:		0.0	
				Lane Equivalent Distance (in feet)					
		Autos:		36.235					
		Medium Trucks:		35.990					
		Heavy Trucks:		36.014					
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	-1.13	1.99	-1.20	-4.66	0.000	0.000		
Medium Trucks:	82.40	-18.08	2.04	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	86.40	-10.23	2.03	-1.20	-5.40	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	71.4	69.4	68.1	62.1	70.5	71.2			
Medium Trucks:	65.2	61.3	53.8	62.5	68.7	68.7			
Heavy Trucks:	68.0	64.0	60.5	65.2	71.4	71.5			
Vehicle Noise:	73.7	71.0	69.0	68.3	75.1	75.4			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				116	751	540	1,163		
CNEL:				121	261	563	1,213		

Thursday, October 6, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Ethanac Rd. Road Segment: e/o Barnett Rd.				Project Name: Barnett and Ethanac Job Number: 14775					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 34,020 vehicles Peak Hour Percentage: 10.00% Peak Hour Volume: 3,402 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 78 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
				VehicleType		Day	Evening	Night	Daily
				Autos:		75.6%	14.0%	10.5%	97.42%
				Medium Trucks:		48.9%	2.2%	48.9%	1.84%
				Heavy Trucks:		47.3%	5.4%	47.3%	0.74%
				Noise Source Elevations (in feet)					
				Autos:		0.000			
				Medium Trucks:		2.297			
				Heavy Trucks:		8.004      Grade Adjustment: 0.0			
				Lane Equivalent Distance (in feet)					
Autos:		36.235							
Medium Trucks:		35.990							
Heavy Trucks:		36.014							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	2.49	1.99	-1.20	-4.66	0.000	0.000		
Medium Trucks:	82.40	-14.74	2.04	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	86.40	-18.70	2.03	-1.20	-5.40	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	75.1	73.1	71.7	65.7	74.2	74.8			
Medium Trucks:	68.5	64.6	57.1	65.9	72.0	72.1			
Heavy Trucks:	68.5	64.5	61.1	65.7	71.9	72.0			
Vehicle Noise:	76.7	74.1	72.2	70.5	77.6	77.9			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				170	367	790	1,703		
CNEL:				179	386	831	1,791		

Thursday, October 6, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYCP Road Name: Ethanac Rd. Road Segment: e/o Barnett Rd.					Project Name: Barnett and Ethanac Job Number: 14775				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 34,435 vehicles Peak Hour Percentage: 10.00% Peak Hour Volume: 3,444 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 78 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data  Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 53.0 feet Centerline Dist. to Observer: 53.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Vehicle Mix				
					Vehicle Type	Day	Evening	Night	Daily
					Autos:	75.6%	14.0%	10.5%	97.05%
					Medium Trucks:	48.9%	2.2%	48.9%	1.89%
					Heavy Trucks:	47.3%	5.4%	47.3%	1.07%
					Noise Source Elevations (in feet)				
					Autos:	0.000			
					Medium Trucks:	2.297			
					Heavy Trucks:	8.004	Grade Adjustment: 0.0		
					Lane Equivalent Distance (in feet)				
					Autos:	36.235			
					Medium Trucks:	35.990			
					Heavy Trucks:	36.014			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	2.53	1.99	-1.20	-4.66	0.000		0.000	
Medium Trucks:	82.40	-14.58	2.04	-1.20	-4.87	0.000		0.000	
Heavy Trucks:	86.40	-17.06	2.03	-1.20	-5.40	0.000		0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	75.1	73.1	71.8	65.8	74.2	74.8			
Medium Trucks:	68.7	64.8	57.3	66.0	72.2	72.2			
Heavy Trucks:	70.2	66.1	62.7	67.4	73.6	73.7			
Vehicle Noise:	77.0	74.4	72.4	71.2	78.2	78.5			
Centerline Distance to Noise Contour (in feet)									
		70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:		186	400	862	1,856				
CNEL:		194	419	903	1,945				



FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Ethanac Rd. Road Segment: e/o I-215 NB Ramps				Project Name: Barnett and Ethanac Job Number: 14775					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 12,790 vehicles Peak Hour Percentage: 10.00% Peak Hour Volume: 1,279 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 78 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data  Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 53.0 feet Centerline Dist. to Observer: 53.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Vehicle Mix					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		75.6%	14.0%	10.5%	97.42%
				Medium Trucks:		48.9%	2.2%	48.9%	1.84%
				Heavy Trucks:		47.3%	5.4%	47.3%	0.74%
				Noise Source Elevations (in feet)					
				Autos:		0.000			
				Medium Trucks:		2.297			
				Heavy Trucks:		8.004		Grade Adjustment: 0.0	
				Lane Equivalent Distance (in feet)					
				Autos:		36.235			
				Medium Trucks:		35.990			
				Heavy Trucks:		36.014			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	-1.75	1.99	-1.20	-4.66	0.000	0.000		
Medium Trucks:	82.40	-18.99	2.04	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	86.40	-22.05	2.03	-1.20	-5.40	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.8	68.8	67.5	61.5	69.9	70.5			
Medium Trucks:	64.2	60.4	52.8	61.6	67.8	67.8			
Heavy Trucks:	64.3	60.2	56.8	61.5	67.7	67.8			
Vehicle Noise:	72.4	69.9	68.0	66.3	73.4	73.7			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			89	191	417	887			
CNEL:			93	201	433	933			

Thursday, October 6, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Ethanac Rd. Road Segment: e/o I-215 NB Ramps				Project Name: Barnett and Ethanac Job Number: 14775					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 12,808 vehicles Peak Hour Percentage: 10.00% Peak Hour Volume: 1,281 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 78 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 53.0 feet Centerline Dist. to Observer: 53.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				VehicleType	Day	Evening	Night	Daily	
				Autos: 75.6% 14.0% 10.5% 97.42% Medium Trucks: 48.9% 2.2% 48.9% 1.84% Heavy Trucks: 47.3% 5.4% 47.3% 0.74%					
				Noise Source Elevations (in feet)					
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004      Grade Adjustment: 0.0					
				Lane Equivalent Distance (in feet)					
				Autos: 36.235 Medium Trucks: 35.990 Heavy Trucks: 36.014					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	-1.75	1.99	-1.20	-4.66	0.000	0.000		
Medium Trucks:	82.40	-18.99	2.04	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	86.40	-22.05	2.03	-1.20	-5.40	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.8	68.8	67.5	61.5	69.9	70.5			
Medium Trucks:	64.2	60.4	52.8	61.6	67.8	67.8			
Heavy Trucks:	64.3	60.2	56.8	61.5	67.7	67.8			
Vehicle Noise:	72.4	69.9	68.0	66.3	73.4	73.7			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				89	191	417	887		
CNEL:				93	201	433	933		

Thursday, October 6, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Ethanac Rd. Road Segment: e/o I-215 NB Ramps				Project Name: Barnett and Ethanac Job Number: 14775					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 17,360 vehicles Peak Hour Percentage: 10.00% Peak Hour Volume: 1,736 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 78 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
				Autos:	75.6%	14.0%	10.5%	97.42%	
				Medium Trucks:	48.9%	2.2%	48.9%	1.84%	
				Heavy Trucks:	47.3%	5.4%	47.3%	0.74%	
				Noise Source Elevations (in feet)					
				Autos:	0.000				
				Medium Trucks:	2.297				
				Heavy Trucks:	8.004	Grade Adjustment: 0.0			
				Lane Equivalent Distance (in feet)					
				Autos:	36.235				
				Medium Trucks:	35.990				
				Heavy Trucks:	36.014				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	-0.43	1.99	-1.20	-4.66	0.000	0.000		
Medium Trucks:	82.40	-17.67	2.04	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	86.40	-21.62	2.03	-1.20	-5.40	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	72.1	70.1	68.8	62.8	71.2	71.9			
Medium Trucks:	65.6	61.7	54.2	62.9	69.1	69.1			
Heavy Trucks:	65.6	61.6	58.2	62.8	69.0	69.1			
Vehicle Noise:	73.7	71.2	69.3	67.6	74.7	75.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			109	234	505	1,087			
CNEL:			114	246	531	1,144			

Thursday, October 6, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYCP Road Name: Ethanac Rd. Road Segment: e/o I-215 NB Ramps				Project Name: Barnett and Ethanac Job Number: 14775					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 17,378 vehicles Peak Hour Percentage: 10.00% Peak Hour Volume: 1,738 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 78 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 53.0 feet Centerline Dist. to Observer: 53.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				VehicleType	Day	Evening	Night	Daily	
				Autos: 75.6% 14.0% 10.5% 97.42% Medium Trucks: 48.9% 2.2% 48.9% 1.84% Heavy Trucks: 47.3% 5.4% 47.3% 0.74%					
				Noise Source Elevations (in feet)					
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004      Grade Adjustment: 0.0					
				Lane Equivalent Distance (in feet)					
				Autos: 36.235 Medium Trucks: 35.990 Heavy Trucks: 36.014					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	-0.42	1.99	-1.20	-4.66	0.000	0.000		
Medium Trucks:	82.40	-17.67	2.04	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	86.40	-21.62	2.03	-1.20	-5.40	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	72.2	70.1	68.8	62.8	71.2	71.9			
Medium Trucks:	65.6	61.7	54.2	62.9	69.1	69.1			
Heavy Trucks:	65.6	61.6	58.2	62.8	69.0	69.1			
Vehicle Noise:	73.7	71.2	69.3	67.6	74.7	75.0			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				109	234	505	1,088		
CNEL:				114	246	531	1,144		



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## **APPENDIX 9.1:**

### **CADNAA OPERATIONAL NOISE MODEL INPUTS**



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## 14775 - Barnett & Ethanac

CadnaA Noise Prediction Model: 14775-03.cna

Date: 21.11.22

Analyst: B. Lawson

### Calculation Configuration

Configuration	
Parameter	Value
General	
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.01
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	999.99
Min. Length of Section (#(Unit,LEN))	1.01
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	2
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rcvr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Incl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.50
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

### Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
RECEIVERS		R1	38.9	38.9	45.5	65.0	45.0	0.0				5.00	a	6272495.65	2215025.66	5.00
RECEIVERS		R2	38.4	38.3	45.0	65.0	45.0	0.0				5.00	a	6276823.49	2212557.32	5.00
RECEIVERS		R3	39.7	39.7	46.4	65.0	45.0	0.0				5.00	a	6274958.22	2211990.63	5.00
RECEIVERS		R4	42.8	42.8	49.4	65.0	45.0	0.0				5.00	a	6274472.96	2212550.70	5.00
RECEIVERS		R5	41.2	41.1	47.8	65.0	45.0	0.0				5.00	a	6273364.28	2212597.76	5.00
RECEIVERS		R6	44.6	44.6	51.3	65.0	45.0	0.0				5.00	a	6272901.98	2213645.67	5.00

### Point Source(s)

Name	M.	ID	Result. PWL			Lw / Li		Operating Time			Height		Coordinates			
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)		X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
POINTSOURCE		AC01	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6274412.12	2214083.47	50.00
POINTSOURCE		AC02	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6274775.34	2214081.53	50.00
POINTSOURCE		AC03	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6274779.22	2214505.77	50.00
POINTSOURCE		AC04	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6274414.06	2214505.77	50.00
POINTSOURCE		CAR01	81.1	81.1	81.1	Lw	81.1					5.00	a	6274777.20	2214827.11	5.00
POINTSOURCE		CAR02	81.1	81.1	81.1	Lw	81.1					5.00	a	6274730.54	2214826.50	5.00
POINTSOURCE		CAR03	81.1	81.1	81.1	Lw	81.1					5.00	a	6274669.14	2214827.11	5.00
POINTSOURCE		CAR04	81.1	81.1	81.1	Lw	81.1					5.00	a	6274610.81	2214826.50	5.00
POINTSOURCE		CAR05	81.1	81.1	81.1	Lw	81.1					5.00	a	6274545.73	2214826.50	5.00
POINTSOURCE		CAR06	81.1	81.1	81.1	Lw	81.1					5.00	a	6274491.08	2214827.72	5.00
POINTSOURCE		CAR07	81.1	81.1	81.1	Lw	81.1					5.00	a	6274433.37	2214827.72	5.00
POINTSOURCE		CAR08	81.1	81.1	81.1	Lw	81.1					5.00	a	6274375.65	2214782.29	5.00



Name	M.	ID	Result: PWL			Lw / Li			Operating Time			Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night			X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
POINTSOURCE		CAR09	81.1	81.1	81.1	Lw	81.1					5.00	a	6274332.67	2214755.27	5.00
POINTSOURCE		CAR10	81.1	81.1	81.1	Lw	81.1					5.00	a	6274375.65	2214731.94	5.00
POINTSOURCE		CAR11	81.1	81.1	81.1	Lw	81.1					5.00	a	6274332.06	2214693.26	5.00
POINTSOURCE		CAR12	81.1	81.1	81.1	Lw	81.1					5.00	a	6274375.65	2214676.68	5.00
POINTSOURCE		CAR13	81.1	81.1	81.1	Lw	81.1					5.00	a	6274333.29	2214634.93	5.00
POINTSOURCE		CAR14	81.1	81.1	81.1	Lw	81.1					5.00	a	6274375.65	2214622.04	5.00
POINTSOURCE		CAR15	81.1	81.1	81.1	Lw	81.1					5.00	a	6274332.06	2214592.57	5.00
POINTSOURCE		CAR16	81.1	81.1	81.1	Lw	81.1					5.00	a	6274375.04	2214547.13	5.00
POINTSOURCE		CAR17	81.1	81.1	81.1	Lw	81.1					5.00	a	6274330.22	2214534.85	5.00
POINTSOURCE		CAR18	81.1	81.1	81.1	Lw	81.1					5.00	a	6274330.22	2214474.07	5.00
POINTSOURCE		CAR19	81.1	81.1	81.1	Lw	81.1					5.00	a	6274375.04	2214500.47	5.00
POINTSOURCE		CAR20	81.1	81.1	81.1	Lw	81.1					5.00	a	6274403.90	2214454.42	5.00
POINTSOURCE		CAR21	81.1	81.1	81.1	Lw	81.1					5.00	a	6274403.90	2214410.21	5.00
POINTSOURCE		CAR22	81.1	81.1	81.1	Lw	81.1					5.00	a	6274330.22	2214410.83	5.00
POINTSOURCE		CAR23	81.1	81.1	81.1	Lw	81.1					5.00	a	6274330.22	2214351.27	5.00
POINTSOURCE		CAR24	81.1	81.1	81.1	Lw	81.1					5.00	a	6274330.22	2214297.85	5.00
POINTSOURCE		CAR25	81.1	81.1	81.1	Lw	81.1					5.00	a	6274372.58	2214331.01	5.00
POINTSOURCE		CAR26	81.1	81.1	81.1	Lw	81.1					5.00	a	6274328.38	2214245.05	5.00
POINTSOURCE		CAR27	81.1	81.1	81.1	Lw	81.1					5.00	a	6274370.13	2214263.47	5.00
POINTSOURCE		CAR28	81.1	81.1	81.1	Lw	81.1					5.00	a	6274327.76	2214189.18	5.00
POINTSOURCE		CAR29	81.1	81.1	81.1	Lw	81.1					5.00	a	6274327.15	2214139.44	5.00
POINTSOURCE		CAR30	81.1	81.1	81.1	Lw	81.1					5.00	a	6274371.97	2214217.42	5.00
POINTSOURCE		CAR31	81.1	81.1	81.1	Lw	81.1					5.00	a	6274371.97	2214165.23	5.00
POINTSOURCE		CAR32	81.1	81.1	81.1	Lw	81.1					5.00	a	6274325.31	2214086.02	5.00
POINTSOURCE		CAR33	81.1	81.1	81.1	Lw	81.1					5.00	a	6274373.20	2214106.29	5.00
POINTSOURCE		CAR34	81.1	81.1	81.1	Lw	81.1					5.00	a	6274325.31	2214025.85	5.00
POINTSOURCE		CAR35	81.1	81.1	81.1	Lw	81.1					5.00	a	6274326.53	2213984.72	5.00
POINTSOURCE		CAR36	81.1	81.1	81.1	Lw	81.1					5.00	a	6274397.76	2214037.52	5.00
POINTSOURCE		CAR37	81.1	81.1	81.1	Lw	81.1					5.00	a	6274412.49	2213993.93	5.00
POINTSOURCE		CAR38	81.1	81.1	81.1	Lw	81.1					5.00	a	6274335.13	2213922.70	5.00
POINTSOURCE		CAR39	81.1	81.1	81.1	Lw	81.1					5.00	a	6274345.57	2213869.29	5.00
POINTSOURCE		CAR40	81.1	81.1	81.1	Lw	81.1					5.00	a	6274366.44	2213815.87	5.00
POINTSOURCE		CAR41	81.1	81.1	81.1	Lw	81.1					5.00	a	6274394.07	2213769.82	5.00
POINTSOURCE		CAR42	81.1	81.1	81.1	Lw	81.1					5.00	a	6274428.46	2213719.47	5.00
POINTSOURCE		CAR43	81.1	81.1	81.1	Lw	81.1					5.00	a	6274473.28	2213677.72	5.00
POINTSOURCE		CAR44	81.1	81.1	81.1	Lw	81.1					5.00	a	6274520.55	2213718.25	5.00
POINTSOURCE		CAR45	81.1	81.1	81.1	Lw	81.1					5.00	a	6274552.48	2213779.64	5.00
POINTSOURCE		CAR46	81.1	81.1	81.1	Lw	81.1					5.00	a	6274575.81	2213829.38	5.00
POINTSOURCE		CAR47	81.1	81.1	81.1	Lw	81.1					5.00	a	6274602.83	2213886.48	5.00
POINTSOURCE		CAR48	81.1	81.1	81.1	Lw	81.1					5.00	a	6274553.10	2213949.72	5.00
POINTSOURCE		CAR49	81.1	81.1	81.1	Lw	81.1					5.00	a	6274488.01	2213950.33	5.00
POINTSOURCE		CAR50	81.1	81.1	81.1	Lw	81.1					5.00	a	6274419.86	2213951.56	5.00
POINTSOURCE		CAR51	81.1	81.1	81.1	Lw	81.1					5.00	a	6274392.84	2213911.04	5.00
POINTSOURCE		CAR52	81.1	81.1	81.1	Lw	81.1					5.00	a	6274452.40	2213911.04	5.00
POINTSOURCE		CAR53	81.1	81.1	81.1	Lw	81.1					5.00	a	6274518.10	2213911.04	5.00
POINTSOURCE		CAR54	81.1	81.1	81.1	Lw	81.1					5.00	a	6274420.47	2213883.41	5.00
POINTSOURCE		CAR55	81.1	81.1	81.1	Lw	81.1					5.00	a	6274492.31	2213883.41	5.00
POINTSOURCE		CAR56	81.1	81.1	81.1	Lw	81.1					5.00	a	6274543.89	2213882.18	5.00
POINTSOURCE		CAR57	81.1	81.1	81.1	Lw	81.1					5.00	a	6274514.41	2213844.73	5.00
POINTSOURCE		CAR58	81.1	81.1	81.1	Lw	81.1					5.00	a	6274458.54	2213846.57	5.00
POINTSOURCE		CAR59	81.1	81.1	81.1	Lw	81.1					5.00	a	6274408.81	2213846.57	5.00
POINTSOURCE		CAR60	81.1	81.1	81.1	Lw	81.1					5.00	a	6274483.10	2213818.94	5.00
POINTSOURCE		CAR61	81.1	81.1	81.1	Lw	81.1					5.00	a	6274420.47	2213821.40	5.00
POINTSOURCE		CAR62	81.1	81.1	81.1	Lw	81.1					5.00	a	6274447.49	2213782.10	5.00
POINTSOURCE		CAR63	81.1	81.1	81.1	Lw	81.1					5.00	a	6274488.63	2213780.87	5.00
POINTSOURCE		CAR64	81.1	81.1	81.1	Lw	81.1					5.00	a	6274451.17	2213745.87	5.00
POINTSOURCE		CAR65	81.1	81.1	81.1	Lw	81.1					5.00	a	6274394.69	2214892.19	5.00
POINTSOURCE		CAR66	81.1	81.1	81.1	Lw	81.1					5.00	a	6274351.09	2214891.58	5.00
POINTSOURCE		CAR67	81.1	81.1	81.1	Lw	81.1					5.00	a	6274424.16	2214938.86	5.00
POINTSOURCE		CAR68	81.1	81.1	81.1	Lw	81.1					5.00	a	6274387.32	2214963.42	5.00
POINTSOURCE		CAR69	81.1	81.1	81.1	Lw	81.1					5.00	a	6274426.00	2214992.27	5.00
POINTSOURCE		CAR70	81.1	81.1	81.1	Lw	81.1					5.00	a	6274387.32	2215026.04	5.00
POINTSOURCE		CAR71	81.1	81.1	81.1	Lw	81.1					5.00	a	6274427.23	2215056.13	5.00
POINTSOURCE		CAR72	81.1	81.1	81.1	Lw	81.1					5.00	a	6274388.55	2215095.42	5.00
POINTSOURCE		CAR73	81.1	81.1	81.1	Lw	81.1					5.00	a	6274427.23	2215123.67	5.00
POINTSOURCE		CAR74	81.1	81.1	81.1	Lw	81.1					5.00	a	6274357.85	2215123.67	5.00
POINTSOURCE		CAR75	81.1	81.1	81.1	Lw	81.1					5.00	a	6274360.30	2215067.79	5.00
POINTSOURCE		CAR76	81.1	81.1	81.1	Lw	81.1					5.00	a	6274360.92	2214991.05	5.00
POINTSOURCE		CAR77	81.1	81.1	81.1	Lw	81.1					5.00	a	6274359.07	2214937.01	5.00
POINTSOURCE		TRASH01	89.0	89.0	89.0	Lw	89					5.00	a	6274436.79	2214454.57	5.00
POINTSOURCE		TRASH02	89.0	89.0	89.0	Lw	89					5.00	a	6274433.82	2214037.64	5.00

Line Source(s)



Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Operating Time			Moving Pt. Src			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	Number				
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	Day	Evening	Night	(mph)	(ft)
LINESOURCE		TRUCK01	93.2	93.2	93.2	65.9	65.9	65.9	Lw	93.2								8	a
LINESOURCE		TRUCK02	93.2	93.2	93.2	71.5	71.5	71.5	Lw	93.2								8	a

Name	Height		Coordinates			
	Begin	End	x	y	z	Ground
	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
LINESOURCE	8.00	a	6274838.03	2214847.99	8.00	0.00
			6274405.12	2214852.28	8.00	0.00
			6274374.42	2214841.23	8.00	0.00
			6274354.78	2214816.67	8.00	0.00
			6274351.09	2214035.06	8.00	0.00
			6274363.37	2214022.78	8.00	0.00
			6274387.93	2214016.64	8.00	0.00
			6274423.54	2214014.19	8.00	0.00
			6274836.61	2214014.18	8.00	0.00
LINESOURCE	8.00	a	6274352.97	2214432.32	8.00	0.00
			6274837.32	2214430.48	8.00	0.00

## Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL''			Lw / Li			Operating Time			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
AREASOURCE		DOCK01	111.5	111.5	111.5	76.4	76.4	76.4	Lw	111.5					8	a
AREASOURCE		DOCK02	111.5	111.5	111.5	76.5	76.5	76.5	Lw	111.5					8	a

Name	Height		Coordinates			
	Begin	End	x	y	z	Ground
	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
AREASOURCE	8.00	a	6274441.18	2214529.98	8.00	0.00
			6274701.73	2214528.05	8.00	0.00
			6274698.23	2214391.08	8.00	0.00
			6274444.99	2214392.99	8.00	0.00
AREASOURCE	8.00	a	6274440.21	2214115.43	8.00	0.00
			6274698.82	2214111.55	8.00	0.00
			6274694.40	2213979.64	8.00	0.00
			6274441.16	2213980.92	8.00	0.00

## Building(s)

Name	M.	ID	RB	Residents	Absorption	Height	Coordinates				
						Begin		x	y	z	Ground
						(ft)		(ft)	(ft)	(ft)	(ft)
BUILDING		BUILDING00001	x	0		45.00	a	6274395.66	2214808.94	45.00	0.00
								6274806.34	2214805.06	45.00	0.00
								6274803.43	2214471.87	45.00	0.00
								6274701.73	2214470.90	45.00	0.00
								6274701.73	2214528.05	45.00	0.00
								6274441.18	2214529.98	45.00	0.00
								6274442.15	2214468.96	45.00	0.00
								6274387.91	2214472.84	45.00	0.00
BUILDING		BUILDING00002	x	0		45.00	a	6274389.84	2214390.51	45.00	0.00
								6274803.43	2214389.54	45.00	0.00
								6274798.59	2214052.47	45.00	0.00
								6274695.92	2214051.50	45.00	0.00
								6274698.82	2214111.55	45.00	0.00
								6274440.21	2214115.43	45.00	0.00
								6274439.24	2214051.50	45.00	0.00
								6274385.97	2214055.38	45.00	0.00



## 14775 - Barnett & Ethanac

CadnaA Noise Prediction Model: 14775-04\_Lmax.cna

Date: 19.05.23

Analyst: B. Lawson

### Calculation Configuration

Configuration	
Parameter	Value
General	
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.01
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	999.99
Min. Length of Section (#(Unit,LEN))	1.01
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	2
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rcvr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Incl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.50
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

### Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
RECEIVERS	R7	44.8	44.8	51.5	80.0	60.0	60.0	0.0				5.00	a	6273203.01	2215538.23	5.00
RECEIVERS	R8	50.7	50.7	57.4	80.0	60.0	60.0	0.0				5.00	a	6274154.44	2215348.08	5.00

### Point Source(s)

Name	M.	ID	Result. PWL			Lw / Li		Operating Time			Height		Coordinates			
			Day	Evening	Night	Iype	Value	norm.	Day	Special	Night			X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
POINTSOURCE		AC01	89.4	89.4	89.4	Lw	89.4		585.00	0.00	252.00	5.00	g	6274412.12	2214083.47	50.00
POINTSOURCE		AC02	89.4	89.4	89.4	Lw	89.4		585.00	0.00	252.00	5.00	g	6274775.34	2214081.53	50.00
POINTSOURCE		AC03	89.4	89.4	89.4	Lw	89.4		585.00	0.00	252.00	5.00	g	6274779.22	2214505.77	50.00
POINTSOURCE		AC04	89.4	89.4	89.4	Lw	89.4		585.00	0.00	252.00	5.00	g	6274414.06	2214505.77	50.00
POINTSOURCE		CAR01	91.4	91.4	91.4	Lw	91.4					5.00	a	6274777.20	2214827.11	5.00
POINTSOURCE		CAR02	91.4	91.4	91.4	Lw	91.4					5.00	a	6274730.54	2214826.50	5.00
POINTSOURCE		CAR03	91.4	91.4	91.4	Lw	91.4					5.00	a	6274669.14	2214827.11	5.00
POINTSOURCE		CAR04	91.4	91.4	91.4	Lw	91.4					5.00	a	6274610.81	2214826.50	5.00
POINTSOURCE		CAR05	91.4	91.4	91.4	Lw	91.4					5.00	a	6274545.73	2214826.50	5.00
POINTSOURCE		CAR06	91.4	91.4	91.4	Lw	91.4					5.00	a	6274491.08	2214827.72	5.00
POINTSOURCE		CAR07	91.4	91.4	91.4	Lw	91.4					5.00	a	6274433.37	2214827.72	5.00
POINTSOURCE		CAR08	91.4	91.4	91.4	Lw	91.4					5.00	a	6274375.65	2214782.29	5.00
POINTSOURCE		CAR09	91.4	91.4	91.4	Lw	91.4					5.00	a	6274332.67	2214755.27	5.00
POINTSOURCE		CAR10	91.4	91.4	91.4	Lw	91.4					5.00	a	6274375.65	2214731.94	5.00
POINTSOURCE		CAR11	91.4	91.4	91.4	Lw	91.4					5.00	a	6274332.06	2214693.26	5.00
POINTSOURCE		CAR12	91.4	91.4	91.4	Lw	91.4					5.00	a	6274375.65	2214676.68	5.00
POINTSOURCE		CAR13	91.4	91.4	91.4	Lw	91.4					5.00	a	6274333.29	2214634.93	5.00
POINTSOURCE		CAR14	91.4	91.4	91.4	Lw	91.4					5.00	a	6274375.65	2214622.04	5.00



Name	M.	ID	Result: PWL			Lw / Li		Operating Time			Height		Coordinates			
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)		X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)			(ft)	(ft)	(ft)
POINTSOURCE		CAR15	91.4	91.4	91.4	Lw	91.4					5.00	a	6274332.06	2214592.57	5.00
POINTSOURCE		CAR16	91.4	91.4	91.4	Lw	91.4					5.00	a	6274375.04	2214547.13	5.00
POINTSOURCE		CAR17	91.4	91.4	91.4	Lw	91.4					5.00	a	6274330.22	2214534.85	5.00
POINTSOURCE		CAR18	91.4	91.4	91.4	Lw	91.4					5.00	a	6274330.22	2214474.07	5.00
POINTSOURCE		CAR19	91.4	91.4	91.4	Lw	91.4					5.00	a	6274375.04	2214500.47	5.00
POINTSOURCE		CAR20	91.4	91.4	91.4	Lw	91.4					5.00	a	6274403.90	2214454.42	5.00
POINTSOURCE		CAR21	91.4	91.4	91.4	Lw	91.4					5.00	a	6274403.90	2214410.21	5.00
POINTSOURCE		CAR22	91.4	91.4	91.4	Lw	91.4					5.00	a	6274330.22	2214410.83	5.00
POINTSOURCE		CAR23	91.4	91.4	91.4	Lw	91.4					5.00	a	6274330.22	2214351.27	5.00
POINTSOURCE		CAR24	91.4	91.4	91.4	Lw	91.4					5.00	a	6274330.22	2214297.85	5.00
POINTSOURCE		CAR25	91.4	91.4	91.4	Lw	91.4					5.00	a	6274372.58	2214331.01	5.00
POINTSOURCE		CAR26	91.4	91.4	91.4	Lw	91.4					5.00	a	6274328.38	2214245.05	5.00
POINTSOURCE		CAR27	91.4	91.4	91.4	Lw	91.4					5.00	a	6274370.13	2214263.47	5.00
POINTSOURCE		CAR28	91.4	91.4	91.4	Lw	91.4					5.00	a	6274327.76	2214189.18	5.00
POINTSOURCE		CAR29	91.4	91.4	91.4	Lw	91.4					5.00	a	6274327.15	2214139.44	5.00
POINTSOURCE		CAR30	91.4	91.4	91.4	Lw	91.4					5.00	a	6274371.97	2214217.42	5.00
POINTSOURCE		CAR31	91.4	91.4	91.4	Lw	91.4					5.00	a	6274371.97	2214165.23	5.00
POINTSOURCE		CAR32	91.4	91.4	91.4	Lw	91.4					5.00	a	6274325.31	2214086.02	5.00
POINTSOURCE		CAR33	91.4	91.4	91.4	Lw	91.4					5.00	a	6274373.20	2214106.29	5.00
POINTSOURCE		CAR34	91.4	91.4	91.4	Lw	91.4					5.00	a	6274325.31	2214025.85	5.00
POINTSOURCE		CAR35	91.4	91.4	91.4	Lw	91.4					5.00	a	6274326.53	2213984.72	5.00
POINTSOURCE		CAR36	91.4	91.4	91.4	Lw	91.4					5.00	a	6274397.76	2214037.52	5.00
POINTSOURCE		CAR37	91.4	91.4	91.4	Lw	91.4					5.00	a	6274412.49	2213993.93	5.00
POINTSOURCE		CAR38	91.4	91.4	91.4	Lw	91.4					5.00	a	6274335.13	2213922.70	5.00
POINTSOURCE		CAR39	91.4	91.4	91.4	Lw	91.4					5.00	a	6274345.57	2213869.29	5.00
POINTSOURCE		CAR40	91.4	91.4	91.4	Lw	91.4					5.00	a	6274366.44	2213815.87	5.00
POINTSOURCE		CAR41	91.4	91.4	91.4	Lw	91.4					5.00	a	6274394.07	2213769.82	5.00
POINTSOURCE		CAR42	91.4	91.4	91.4	Lw	91.4					5.00	a	6274428.46	2213719.47	5.00
POINTSOURCE		CAR43	91.4	91.4	91.4	Lw	91.4					5.00	a	6274473.28	2213677.72	5.00
POINTSOURCE		CAR44	91.4	91.4	91.4	Lw	91.4					5.00	a	6274520.55	2213718.25	5.00
POINTSOURCE		CAR45	91.4	91.4	91.4	Lw	91.4					5.00	a	6274552.48	2213779.64	5.00
POINTSOURCE		CAR46	91.4	91.4	91.4	Lw	91.4					5.00	a	6274575.81	2213829.38	5.00
POINTSOURCE		CAR47	91.4	91.4	91.4	Lw	91.4					5.00	a	6274602.83	2213886.48	5.00
POINTSOURCE		CAR48	91.4	91.4	91.4	Lw	91.4					5.00	a	6274553.10	2213949.72	5.00
POINTSOURCE		CAR49	91.4	91.4	91.4	Lw	91.4					5.00	a	6274488.01	2213950.33	5.00
POINTSOURCE		CAR50	91.4	91.4	91.4	Lw	91.4					5.00	a	6274419.86	2213951.56	5.00
POINTSOURCE		CAR51	91.4	91.4	91.4	Lw	91.4					5.00	a	6274392.84	2213911.04	5.00
POINTSOURCE		CAR52	91.4	91.4	91.4	Lw	91.4					5.00	a	6274452.40	2213911.04	5.00
POINTSOURCE		CAR53	91.4	91.4	91.4	Lw	91.4					5.00	a	6274518.10	2213911.04	5.00
POINTSOURCE		CAR54	91.4	91.4	91.4	Lw	91.4					5.00	a	6274420.47	2213883.41	5.00
POINTSOURCE		CAR55	91.4	91.4	91.4	Lw	91.4					5.00	a	6274492.31	2213883.41	5.00
POINTSOURCE		CAR56	91.4	91.4	91.4	Lw	91.4					5.00	a	6274543.89	2213882.18	5.00
POINTSOURCE		CAR57	91.4	91.4	91.4	Lw	91.4					5.00	a	6274514.41	2213844.73	5.00
POINTSOURCE		CAR58	91.4	91.4	91.4	Lw	91.4					5.00	a	6274458.54	2213846.57	5.00
POINTSOURCE		CAR59	91.4	91.4	91.4	Lw	91.4					5.00	a	6274408.81	2213846.57	5.00
POINTSOURCE		CAR60	91.4	91.4	91.4	Lw	91.4					5.00	a	6274483.10	2213818.94	5.00
POINTSOURCE		CAR61	91.4	91.4	91.4	Lw	91.4					5.00	a	6274420.47	2213821.40	5.00
POINTSOURCE		CAR62	91.4	91.4	91.4	Lw	91.4					5.00	a	6274447.49	2213782.10	5.00
POINTSOURCE		CAR63	91.4	91.4	91.4	Lw	91.4					5.00	a	6274488.63	2213780.87	5.00
POINTSOURCE		CAR64	91.4	91.4	91.4	Lw	91.4					5.00	a	6274451.17	2213745.87	5.00
POINTSOURCE		CAR65	91.4	91.4	91.4	Lw	91.4					5.00	a	6274394.69	2214892.19	5.00
POINTSOURCE		CAR66	91.4	91.4	91.4	Lw	91.4					5.00	a	6274351.09	2214891.58	5.00
POINTSOURCE		CAR67	91.4	91.4	91.4	Lw	91.4					5.00	a	6274424.16	2214938.86	5.00
POINTSOURCE		CAR68	91.4	91.4	91.4	Lw	91.4					5.00	a	6274387.32	2214963.42	5.00
POINTSOURCE		CAR69	91.4	91.4	91.4	Lw	91.4					5.00	a	6274426.00	2214992.27	5.00
POINTSOURCE		CAR70	91.4	91.4	91.4	Lw	91.4					5.00	a	6274387.32	2215026.04	5.00
POINTSOURCE		CAR71	91.4	91.4	91.4	Lw	91.4					5.00	a	6274427.23	2215056.13	5.00
POINTSOURCE		CAR72	91.4	91.4	91.4	Lw	91.4					5.00	a	6274388.55	2215095.42	5.00
POINTSOURCE		CAR73	91.4	91.4	91.4	Lw	91.4					5.00	a	6274427.23	2215123.67	5.00
POINTSOURCE		CAR74	91.4	91.4	91.4	Lw	91.4					5.00	a	6274357.85	2215123.67	5.00
POINTSOURCE		CAR75	91.4	91.4	91.4	Lw	91.4					5.00	a	6274360.30	2215067.79	5.00
POINTSOURCE		CAR76	91.4	91.4	91.4	Lw	91.4					5.00	a	6274360.92	2214991.05	5.00
POINTSOURCE		CAR77	91.4	91.4	91.4	Lw	91.4					5.00	a	6274359.07	2214937.01	5.00
POINTSOURCE		TRASH01	102.8	102.8	102.8	Lw	102.8					5.00	a	6274436.79	2214454.57	5.00
POINTSOURCE		TRASH02	102.8	102.8	102.8	Lw	102.8					5.00	a	6274433.82	2214037.64	5.00

### Line Source(s)

Name	M.	ID	Result: PWL			Result: PWL'			Lw / Li			Operating Time			Moving Pt. Src				Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	Number			Speed		
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	Day	Evening	Night	(mph)	(ft)	
LINESOURCE		TRUCK01	104.8	104.8	104.8	77.5	77.5	77.5	Lw	104.8									8	a
LINESOURCE		TRUCK02	104.8	104.8	104.8	83.1	83.1	83.1	Lw	104.8									8	a



Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
LINESOURCE	TRUCK01	8.00	a	6274838.03	2214847.99	8.00	0.00
				6274405.12	2214852.28	8.00	0.00
				6274374.42	2214841.23	8.00	0.00
				6274354.78	2214816.67	8.00	0.00
				6274351.09	2214035.06	8.00	0.00
				6274363.37	2214022.78	8.00	0.00
				6274387.93	2214016.64	8.00	0.00
				6274423.54	2214014.19	8.00	0.00
				6274836.61	2214014.18	8.00	0.00
LINESOURCE	TRUCK02	8.00	a	6274352.97	2214432.32	8.00	0.00
				6274837.32	2214430.48	8.00	0.00

## Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL"			Lw / Li			Operating Time			Height
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)		dB(A)	(min)	(min)	(min)	(min)	
AREASOURCE		DOCK01	119.7	119.7	119.7	84.6	84.6	84.6	Lw	119.7					8 a
AREASOURCE		DOCK02	119.7	119.7	119.7	84.7	84.7	84.7	Lw	119.7					8 a

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
AREASOURCE	DOCK01	8.00	a	6274441.18	2214529.98	8.00	0.00
				6274701.73	2214528.05	8.00	0.00
				6274698.23	2214391.08	8.00	0.00
				6274444.99	2214392.99	8.00	0.00
AREASOURCE	DOCK02	8.00	a	6274440.21	2214115.43	8.00	0.00
				6274698.82	2214111.55	8.00	0.00
				6274694.40	2213979.64	8.00	0.00
				6274441.16	2213980.92	8.00	0.00

## Building(s)

Name	Sel.	M.	ID	RB	Residents	Absorption	Height	Coordinates			
							Begin	x	y	z	Ground
							(ft)	(ft)	(ft)	(ft)	(ft)
BUILDING			BUILDING00001	x	0		45.00 a	6274395.66	2214808.94	45.00	0.00
								6274806.34	2214805.06	45.00	0.00
								6274803.43	2214471.87	45.00	0.00
								6274701.73	2214470.90	45.00	0.00
								6274701.73	2214528.05	45.00	0.00
								6274441.18	2214529.98	45.00	0.00
								6274442.15	2214468.96	45.00	0.00
								6274387.91	2214472.84	45.00	0.00
BUILDING			BUILDING00002	x	0		45.00 a	6274389.84	2214390.51	45.00	0.00
								6274803.43	2214389.54	45.00	0.00
								6274798.59	2214052.47	45.00	0.00
								6274695.92	2214051.50	45.00	0.00
								6274698.82	2214111.55	45.00	0.00
								6274440.21	2214115.43	45.00	0.00
								6274439.24	2214051.50	45.00	0.00
								6274385.97	2214055.38	45.00	0.00



## **APPENDIX 10.1:**

### **CADNAA CONSTRUCTION NOISE MODEL INPUTS**



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## 14775 - Barnett & Ethanac

CadnaA Noise Prediction Model: 14775-03\_Construction.cna

Date: 21.11.22

Analyst: B. Lawson

### Calculation Configuration

Configuration	
Parameter	Value
General	
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.01
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	999.99
Min. Length of Section (#(Unit,LEN))	1.01
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	2
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rcvr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Incl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.50
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

### Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
RECEIVERS		R1	51.1	-53.7	48.1	65.0	45.0	0.0				5.00	a	6272495.65	2215025.66	5.00
RECEIVERS		R2	48.0	-56.8	45.0	65.0	45.0	0.0				5.00	a	6276823.49	2212557.32	5.00
RECEIVERS		R3	50.0	-54.8	46.9	65.0	45.0	0.0				5.00	a	6274958.22	2211990.63	5.00
RECEIVERS		R4	52.9	-51.9	49.9	65.0	45.0	0.0				5.00	a	6274472.96	2212550.70	5.00
RECEIVERS		R5	51.2	-53.6	48.2	65.0	45.0	0.0				5.00	a	6273364.28	2212597.76	5.00
RECEIVERS		R6	52.7	-52.1	49.7	65.0	45.0	0.0				5.00	a	6272901.98	2213645.67	5.00

### Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL"			Lw / Li			Operating Time			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
SITEBOUNDARY		CONSTRUCTION	119.8	15.0	15.0	72.3	-32.4	-32.4	PWL-Pt	115					8	a

Name	Height		Coordinates			
	Begin	End	x	y	z	Ground
	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
SITEBOUNDARY	8.00	a	6274265.63	2215191.43	8.00	0.00
			6274452.49	2215187.54	8.00	0.00
			6274476.61	2215187.04	8.00	0.00
			6274475.86	2215136.05	8.00	0.00
			6274502.36	2215135.66	8.00	0.00
			6274498.29	2214859.44	8.00	0.00
			6274838.05	2214855.50	8.00	0.00



Name	Height		Coordinates			
	Begin	End	x	y	z	Ground
	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
			6274836.53	2213964.83	8.00	0.00
			6274666.36	2213969.25	8.00	0.00
			6274513.96	2213641.75	8.00	0.00
			6274489.49	2213642.13	8.00	0.00
			6274418.69	2213705.98	8.00	0.00
			6274379.50	2213758.45	8.00	0.00
			6274349.12	2213816.47	8.00	0.00
			6274328.32	2213878.58	8.00	0.00
			6274318.42	2213936.81	8.00	0.00
			6274316.18	2213973.16	8.00	0.00
			6274317.34	2214618.82	8.00	0.00
			6274315.99	2214996.77	8.00	0.00
			6274306.40	2215064.88	8.00	0.00
			6274288.92	2215131.41	8.00	0.00



## 14775 - Barnett & Ethanac

CadnaA Noise Prediction Model: 14775-04\_ConstructionLmax.cna

Date: 19.05.23

Analyst: B. Lawson

### Calculation Configuration

Configuration	
Parameter	Value
General	
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.01
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	999.99
Min. Length of Section (#(Unit,LEN))	1.01
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	2
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rcvr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Incl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.50
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

### Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height	Coordinates			
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type		X	Y	Z	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)	(ft)	(ft)	(ft)	
RECEIVERS		R7	57.9	-46.9	54.9	80.0	60.0	0.0				5.00	a	6273203.01	2215538.23	5.00
RECEIVERS		R8	64.8	-39.9	61.8	80.0	60.0	0.0				5.00	a	6274154.44	2215348.08	5.00

### Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL"			Lw / Li			Operating Time			Height	
			Day	Evening	Night	Day	Evening	Night	l type	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(min)	(min)	(min)		
SITEBOUNDARY		CONSTRUCTION	124.5	19.7	19.7	77.0	-27.7	-27.7	PWL-Pt	119.7					8	a

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
SITEBOUNDARY	CONSTRUCTION	8.00	a	6274265.63	2215191.43	8.00	0.00
				6274452.49	2215187.54	8.00	0.00
				6274476.61	2215187.04	8.00	0.00
				6274475.86	2215136.05	8.00	0.00
				6274502.36	2215135.66	8.00	0.00
				6274498.29	2214859.44	8.00	0.00
				6274838.05	2214855.50	8.00	0.00
				6274836.53	2213964.83	8.00	0.00
				6274666.36	2213969.25	8.00	0.00
				6274513.96	2213641.75	8.00	0.00
				6274489.49	2213642.13	8.00	0.00
				6274418.69	2213705.98	8.00	0.00
				6274379.50	2213758.45	8.00	0.00



Name	ID	Height			Coordinates			
		Begin	End		x	y	z	Ground
		(ft)	(ft)		(ft)	(ft)	(ft)	(ft)
					6274349.12	2213816.47	8.00	0.00
					6274328.32	2213878.58	8.00	0.00
					6274318.42	2213936.81	8.00	0.00
					6274316.18	2213973.16	8.00	0.00
					6274317.34	2214618.82	8.00	0.00
					6274315.99	2214996.77	8.00	0.00
					6274306.40	2215064.88	8.00	0.00
					6274288.92	2215131.41	8.00	0.00



## **APPENDIX 10.2:**

### **CADNAA CONCRETE POUR NOISE MODEL INPUTS**



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## 14775 - Barnett & Ethanac

CadnaA Noise Prediction Model: 14775-03\_ConcretePour.cna

Date: 21.11.22

Analyst: B. Lawson

### Calculation Configuration

Configuration	
Parameter	Value
General	
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.01
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	999.99
Min. Length of Section (#(Unit,LEN))	1.01
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	2
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rcvr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Incl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.50
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

### Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
RECEIVERS	R1	37.4	37.4	44.0	65.0	45.0	0.0					5.00	a	6272495.65	2215025.66	5.00
RECEIVERS	R2	34.8	34.8	41.4	65.0	45.0	0.0					5.00	a	6276823.49	2212557.32	5.00
RECEIVERS	R3	36.7	36.7	43.4	65.0	45.0	0.0					5.00	a	6274958.22	2211990.63	5.00
RECEIVERS	R4	39.5	39.5	46.2	65.0	45.0	0.0					5.00	a	6274472.96	2212550.70	5.00
RECEIVERS	R5	37.8	37.8	44.4	65.0	45.0	0.0					5.00	a	6273364.28	2212597.76	5.00
RECEIVERS	R6	39.2	39.2	45.8	65.0	45.0	0.0					5.00	a	6272901.98	2213645.67	5.00

### Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL"			Lw / Li			Operating Time			Height
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	
AREASOURCE		DOCK01	100.3	100.3	100.3	65.2	65.2	65.2	Lw	100.3					8 a
AREASOURCE		DOCK02	100.3	100.3	100.3	65.3	65.3	65.3	Lw	100.3					8 a
BUILDING		BUILDING00001	100.3	100.3	100.3	59.7	59.7	59.7	Lw	100.3					8 a
BUILDING		BUILDING00002	100.3	100.3	100.3	59.7	59.7	59.7	Lw	100.3					8 a

Name	Height		Coordinates			
	Begin	End	x	y	z	Ground
	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
AREASOURCE	8.00	a	6274441.18	2214529.98	8.00	0.00
			6274701.73	2214528.05	8.00	0.00
			6274698.23	2214391.08	8.00	0.00
			6274444.99	2214392.99	8.00	0.00



Name	Height		Coordinates			
	Begin	End	x	y	z	Ground
	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
AREASOURCE	8.00	a	6274440.21	2214115.43	8.00	0.00
			6274698.82	2214111.55	8.00	0.00
			6274694.40	2213979.64	8.00	0.00
			6274441.16	2213980.92	8.00	0.00
BUILDING	8.00	a	6274395.66	2214808.94	8.00	0.00
			6274806.34	2214805.06	8.00	0.00
			6274803.43	2214471.87	8.00	0.00
			6274701.73	2214470.90	8.00	0.00
			6274701.73	2214528.05	8.00	0.00
			6274441.18	2214529.98	8.00	0.00
			6274442.15	2214468.96	8.00	0.00
			6274387.91	2214472.84	8.00	0.00
BUILDING	8.00	a	6274389.84	2214390.51	8.00	0.00
			6274803.43	2214389.54	8.00	0.00
			6274798.59	2214052.47	8.00	0.00
			6274695.92	2214051.50	8.00	0.00
			6274698.82	2214111.55	8.00	0.00
			6274440.21	2214115.43	8.00	0.00
			6274439.24	2214051.50	8.00	0.00
			6274385.97	2214055.38	8.00	0.00



## 14775 - Barnett & Ethanac

CadnaA Noise Prediction Model: 14775-04\_ConcretePourLmax.cna

Date: 19.05.23

Analyst: B. Lawson

### Calculation Configuration

Configuration	
Parameter	Value
General	
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.01
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	999.99
Min. Length of Section (#(Unit,LEN))	1.01
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	2
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rcvr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Incl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.50
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

### Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height	Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type		X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)	(ft)	(ft)	(ft)
RECEIVERS	R7	44.3	44.3	51.0	80.0	60.0	0.0	0.0				5.00	a 6273203.01	2215538.23	5.00
RECEIVERS	R8	49.4	49.4	56.1	80.0	60.0	0.0	0.0				5.00	a 6274154.44	2215348.08	5.00

### Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL"			Lw / Li		Operating Time			Height		
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
AREASOURCE		DOCK01	105.4	105.4	105.4	70.3	70.3	70.3	Lw	105.4					8	a
AREASOURCE		DOCK02	105.4	105.4	105.4	70.4	70.4	70.4	Lw	105.4					8	a
BUILDING		BUILDING00001	105.4	105.4	105.4	64.8	64.8	64.8	Lw	105.4					8	a
BUILDING		BUILDING00002	105.4	105.4	105.4	64.8	64.8	64.8	Lw	105.4					8	a

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
AREASOURCE	DOCK01	8.00	a	6274441.18	2214529.98	8.00	0.00
				6274701.73	2214528.05	8.00	0.00
				6274698.23	2214391.08	8.00	0.00
				6274444.99	2214392.99	8.00	0.00
AREASOURCE	DOCK02	8.00	a	6274440.21	2214115.43	8.00	0.00
				6274698.82	2214111.55	8.00	0.00
				6274694.40	2213979.64	8.00	0.00
				6274441.16	2213980.92	8.00	0.00
BUILDING	BUILDING00001	8.00	a	6274395.66	2214808.94	8.00	0.00
				6274806.34	2214805.06	8.00	0.00



Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
				6274803.43	2214471.87	8.00	0.00
				6274701.73	2214470.90	8.00	0.00
				6274701.73	2214528.05	8.00	0.00
				6274441.18	2214529.98	8.00	0.00
				6274442.15	2214468.96	8.00	0.00
				6274387.91	2214472.84	8.00	0.00
BUILDING	BUILDING00002	8.00	a	6274389.84	2214390.51	8.00	0.00
				6274803.43	2214389.54	8.00	0.00
				6274798.59	2214052.47	8.00	0.00
				6274695.92	2214051.50	8.00	0.00
				6274698.82	2214111.55	8.00	0.00
				6274440.21	2214115.43	8.00	0.00
				6274439.24	2214051.50	8.00	0.00
				6274385.97	2214055.38	8.00	0.00



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# Attachment B: Ethanac and Barnett Focused LST and HRA Assessment



**DATE:** May 22, 2023  
**TO:** Konnie Dobрева, EPD Solutions, Inc.  
**FROM:** Haseeb Qureshi, Urban Crossroads, Inc.  
**JOB NO:** 14775-04 RTC

## ETHANAC AND BARNET RESPONSE TO COMMENTS

Urban Crossroads, Inc. is pleased to submit this Response to comments for the proposed Ethanac and Barnett Air Quality and Greenhouse Gas Impact Analysis. This letter has been prepared in response to the comments from the March 20, 2023 and May 3, 2023 Aleshire & Wynder Appeal Letters.

**(March 20, 2023) Response to Appeal 10:** The comment notes that the proposed buildings are anticipated to require a diesel fire water pump, thus the emissions associated with the regular testing of these pumps should be included on the operational project emissions analysis.

The proposed project does not include fire pumps or emergency generators. Therefore, the analysis provided is adequate and accurately reflects the proposed project. However, out of an abundance of caution, an emissions analysis including the operational use and testing of two diesel fire water pumps for the two proposed buildings was conducted as summarized in the *Ethanac and Barnett Focused LST and HRA Assessment* (May 22, 2023). As shown, two diesel fire pumps would generate 3.77 MTCO<sub>2</sub>E annually. When added to the emissions totals presented in the IS/MND, this negligible increase in emissions would not result in any change to the findings or conclusions related to air quality or greenhouse gas emissions. Therefore, the project would result in less than significant air quality and greenhouse gas (GHG) impacts. The comment does not contain any information requiring changes to the MND. No further response is warranted.

**(March 20, 2023) Response to Appeal 11:** The commenter goes on to state that the analysis in the MND needs to be revised to evaluate the emissions from all diesel sources at the project site, including fire pumps and generator. The comment also states that the project analysis should consider that during the lifetime of the project, the nearest sensitive receptors to the project site would be the new residents of the Green Valley Specific Plan (GVSP) area immediately north of Ethanac Road. The comment states that the MND did not fully evaluate the potential diesel particulate health risk to these future residences from all sources at the project site. Additionally, the comment states that the MND did not fully consider cumulative impacts and mitigation associated with other proposed industrial projects in the area.

A supplemental assessment evaluating the potential health risks from the emergency diesel fire pumps as well as additional receptor locations requested is included in the *Ethanac and Barnett Focused LST and HRA Assessment* (May 22, 2023). As shown in this



analysis, the results of the IS/MND are unchanged and a less than significant impact would occur even with the inclusion of emergency diesel fire pumps and the inclusion of potential future receptor locations.

**(May 3, 2023) Response to Appeal 1.6:** It is important to note that the 2022 Scoping Plan builds on the 2017 Scoping Plan as well as the requirements set forth by AB 1279, which directs the state to become carbon neutral no later than 2045. To achieve this statutory objective, the 2022 Scoping Plan lays out how California can reduce GHG emissions by 85% below 1990 levels and achieve carbon neutrality by 2045. The Scoping Plan scenario to do this is to “deploy a broad portfolio of existing and emerging fossil fuel alternatives and clean technologies, and align with statutes, Executive Orders, Board direction, and direction from the governor.” The 2022 Scoping Plan sets one of the most aggressive approaches to reach carbon neutrality in the world.

The Project would not impede the State’s progress towards carbon neutrality by 2045 under the 2022 Scoping Plan. The Project would be required to comply with applicable current and future regulatory requirements promulgated through the 2022 Scoping Plan. Some of the current transportation sector policies the Project will comply with (through vehicle manufacturer compliance) include: Advanced Clean Cars II, Advanced Clean Trucks, Advanced Clean Fleets, Zero Emission Forklifts, the Off-Road Zero-Emission Targeted Manufacturer rule, Clean Off-Road Fleet Recognition Program, In-use Off-Road Diesel-Fueled Fleets Regulation, Off-Road Zero-Emission Targeted Manufacturer rule, Clean Off-Road Fleet Recognition Program, Amendments to the In-use Off-Road Diesel-Fueled Fleets Regulation, carbon pricing through the Cap-and-Trade Program, and the Low Carbon Fuel Standard. As such, the Project would not be inconsistent with the 2022 Scoping Plan.



**DATE:** May 22, 2023  
**TO:** Konnie Dobrev, EPD Solutions, Inc.  
**FROM:** Haseeb Qureshi, Urban Crossroads, Inc.  
**JOB NO:** 14775-04 LST & HRA

## ETHANAC AND BARNETT FOCUSED LST AND HRA ASSESSMENT

Konnie Dobrev,

Urban Crossroads, Inc. is pleased to provide the following Focused LST and HRA Assessment for the Ethanac and Barnett (**Project**). The purpose of this assessment is to clarify the localized air quality impacts and health risk assessment based on additional off-site sensitive receptors (residents) that were not included in the Ethanac and Barnett Warehouse Air Quality Impact Analysis (December 2, 2022) (**AQ Study**) and the Ethanac and Barnett Warehouse Mobile Source Health Risk Assessment (December 2, 2022) (**HRA Study**).

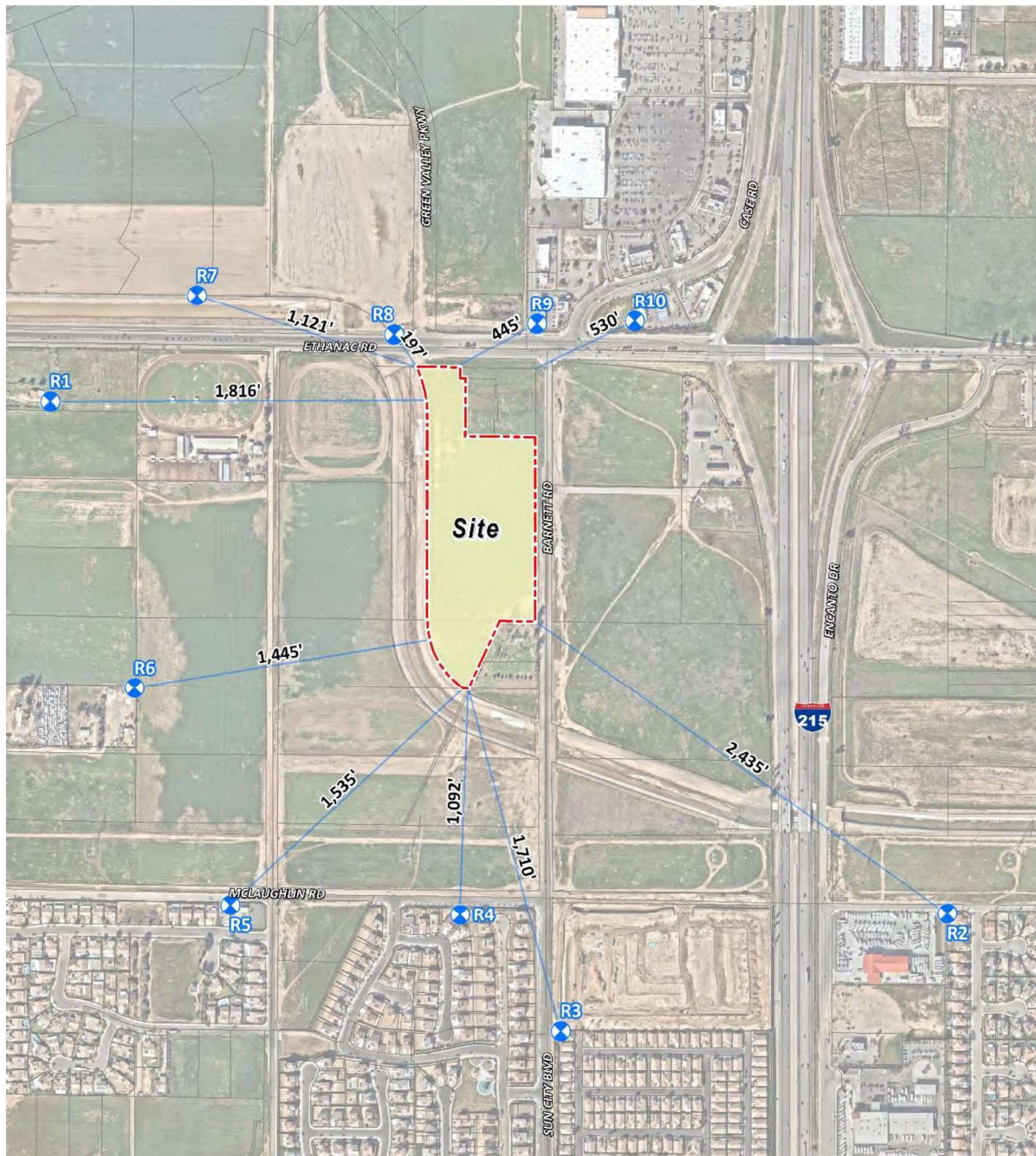
## PROJECT-RELATED AIR QUALITY AND HEALTH RISK ASSESSMENT SENSITIVE RECEPTORS

Receptors in the Project study area are described below and shown on Exhibit 1. Localized air quality impacts and health risk impacts were evaluated at residential and non-residential receptors near the Project site. All distances are measured from the Project site boundary to outdoor living areas (e.g., backyards) or at the building façade, whichever is closer to the Project site, unless otherwise noted.

- R1: Location R1 represents the existing noise sensitive residence at 26038 Hull Street, approximately 1,816 feet west of the Project site. Receptor R1 is placed in the private outdoor living areas (backyards) facing the Project site.
- R2: Location R2 represents the existing noise sensitive residence at 26515 Alta Avenue, approximately 2,435 feet southeast of the Project site. Receptor R2 is placed in the private outdoor living areas (backyards) facing the Project site.
- R3: Location R3 represents the existing noise sensitive residence at 26635 Summer Sunshine Drive, approximately 1,710 feet southeast of the Project site. Receptor R3 is placed in the private outdoor living areas (backyards) facing the Project site.
- R4: Location R4 represents the nearest noise sensitive receiver location within the planned DR Horton residential project located approximately 1,092 feet south of the Project site. Receptor R4 is placed in the private outdoor living areas (backyards) facing the Project site.



## EXHIBIT 1: RECEPTOR LOCATIONS



### LEGEND:

Site Boundary

Receptor Locations

Parcel Boundary

Distance from receptor to Project site boundary (in feet)



- R5: Location R5 represents the existing noise sensitive residence at 26458 Starr Drive, approximately 1,535 feet southwest of the Project site. Receptor R5 is placed in the private outdoor living areas (backyards) facing the Project site.
- R6: Location R6 represents the existing noise sensitive residence at 26340 Corsica Lane, approximately 1,445 feet west of the Project site. Receptor R6 is placed in the private outdoor living areas (backyards) facing the Project site.
- R7: Location R7 represents the property line of the planned future residential land use within the Green Valley Specific Plan, approximately 1,121 feet northwest of the Project site.
- R8: Location R8 represents the property line of the planned future multi-family residential land use within the Green Valley Specific Plan, approximately 197 feet northwest of the Project site.
- R9: Location R9 represents a worker location at the Circle K convenience store located at 3150 Case Road, approximately 445 feet northeast of the Project site. Receptor R9 is placed at the property line.
- R10: Location R10 represents a worker location at the 7-Eleven convenience store located at 3155 Case Road, approximately 530 feet northeast of the Project site. Receptor R10 is placed at the property line.

## **LOCALIZED AIR QUALITY IMPACTS**

### **CONSTRUCTION IMPACTS**

Table 1 identifies the localized impacts at the nearest receptor location in the vicinity of the Project. As shown in Table 1, emissions resulting from the Project construction will not exceed the numerical thresholds of significance established by the SCAQMD for any criteria pollutant. Thus, a less than significant impact would occur for localized Project-related construction-source emissions and no mitigation is required.

### **OPERATIONAL IMPACTS**

Table 2 identifies the localized operational impacts at the nearest receptor location in the vicinity of the Project. As shown in Table 1, emissions resulting from the Project operation will not exceed the numerical localized thresholds of significance established by the SCAQMD for any criteria pollutant. Thus, a less than significant impact would occur for localized Project-related operational-source emissions and no mitigation is required.



**TABLE 1: PROJECT LOCALIZED CONSTRUCTION IMPACTS**

On-Site Emissions	Emissions (lbs/day)			
	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
Site Preparation				
Summer	47.00	38.00	8.19	5.02
Winter	n/a	n/a	n/a	n/a
<b>Maximum Daily Emissions</b>	<b>47.00</b>	<b>38.00</b>	<b>8.19</b>	<b>5.02</b>
SCAQMD Localized Threshold	265	1,943	34	9
Threshold Exceeded?	NO	NO	NO	NO
Grading				
Summer	40.90	32.70	4.63	2.78
Winter	40.90	32.70	4.63	2.78
<b>Maximum Daily Emissions</b>	<b>40.90</b>	<b>32.70</b>	<b>4.63</b>	<b>2.78</b>
SCAQMD Localized Threshold	282	2,105	37	10
Threshold Exceeded?	NO	NO	NO	NO

**TABLE 2: PROJECT LOCALIZED OPERATIONAL IMPACTS**

On-Site Emissions	Emissions (lbs/day)			
	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
Summer	2.81	48.11	0.20	0.11
Winter	2.82	37.38	0.19	0.09
<b>Maximum Daily Emissions</b>	<b>2.82</b>	<b>48.11</b>	<b>0.20</b>	<b>0.11</b>
SCAQMD Localized Threshold	317	2,430	11	3
Threshold Exceeded?	NO	NO	NO	NO

**EMERGENCY DIESEL FIRE PUMPS**

Although the use of diesel fire pumps is unknown at this time, to underscore the negligible amount of emissions that would be generated, a supplemental model run was conducted assuming that the Project could require two (2) 197 hp diesel fire water pump backup generator. For analytical purposes, it is anticipated that the diesel fire water pump generators would result in a maximum time of 0.5 hour per day and 26 hours per year for testing. The two diesel fire pumps would generate 0.31 pounds of VOCs, 0.87 pounds of NO<sub>x</sub>, 0.80 pounds of CO, 0.05 pounds of PM<sub>10</sub>, and 0.05 pounds of PM<sub>2.5</sub> emissions per day during peak conditions. Additionally, the two diesel fire pumps would generate 3.77 metric tons of CO<sub>2</sub>e annually. When added to the emissions totals presented in the IS/MND, this negligible increase in emissions would not result in any change to the findings or conclusions related to air quality or greenhouse gas emissions. Attachment A includes the modeled emissions from the emergency diesel fire pumps.



## HEALTH RISK ASSESSMENT

The health risk assessment has been updated to include the additional receptors discussed above as well as the potential use of the emergency diesel fire pumps. Attachment B includes a summary of the supplemental health risk assessment risk calculations and modeling outputs.

### CONSTRUCTION IMPACTS

The land use with the greatest potential exposure to Project construction-source DPM emissions is Location R8 which is located approximately 197 feet northwest of the Project site at the planned property line of the future multi-family residential land use within the Green Valley Specific Plan. R8 is placed at the property line nearest the Project site. At the maximally exposed individual receptor (MEIR), the maximum incremental cancer risk attributable to Project construction-source DPM emissions is estimated at 1.90 in one million, which is less than the SCAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be  $<0.01$ , which would not exceed the applicable threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction activity. All other receptors during construction activity would experience less risk than what is identified for this location.

### OPERATIONAL IMPACTS

#### Residential Exposure Scenario:

The residential land use with the greatest potential exposure to Project operational-source DPM emissions is Location R8 which is located approximately 197 feet northwest of the Project site at the planned property line of the future multi-family residential land use within the Green Valley Specific Plan. R8 is placed at the property line nearest the Project site. At the MEIR, the maximum incremental cancer risk attributable to Project operational-source DPM emissions is estimated at 0.37 in one million, which is less than the SCAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be  $<0.01$ , which would not exceed the applicable significance threshold of 1.0. Because all other modeled residential receptors are exposed to lesser concentrations and are located at a greater distance from the Project site than the MEIR analyzed herein, and TACs generally dissipates with distance from the source, all other residential receptors in the vicinity of the Project site would be exposed to less emissions and therefore less risk than the MEIR identified herein. As such, the Project will not cause a significant human health or cancer risk to nearby residences.



Worker Exposure Scenario<sup>1</sup>:

The worker receptor land use with the greatest potential exposure to Project operational-source DPM emissions is Location R9, which represents the potential worker receptor approximately 445 feet northeast of the Project site at the property line for the Circle K convenience store. At the maximally exposed individual worker (MEIW), the maximum incremental cancer risk impact is 0.06 in one million which is less than the SCAQMD's threshold of 10 in one million. Maximum non-cancer risks at this same location were estimated to be <0.01, which would not exceed the applicable significance threshold of 1.0. Because all other modeled worker receptors are located at a greater distance than the MEIW analyzed herein, and DPM dissipates with distance from the source, all other worker receptors in the vicinity of the Project would be exposed to less emissions and therefore less risk than the MEIW identified herein. As such, the Project will not cause a significant human health or cancer risk to adjacent workers.

**CONSTRUCTION AND OPERATIONAL IMPACTS**

The land use with the greatest potential increased cancer risk due to exposure to Project construction-source and operational-source DPM emissions is Location R8. At this location, the maximum incremental cancer risk attributable to Project construction and operational DPM source emissions is estimated at 2.08 in one million, which is less than the threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction and operational activity. All other receptors during construction and operational activity would experience less risk than what is identified for this location.

---

<sup>1</sup> SCAQMD guidance does not require assessment of the potential health risk to on-site workers. Excerpts from the document OEHHA Air Toxics Hot Spots Program Risk Assessment Guidelines—The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (OEHHA 2003), also indicate that it is not necessary to examine the health effects to on-site workers unless required by RCRA (Resource Conservation and Recovery Act) / CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) or the worker resides on-site.



**ATTACHMENT A**  
**CALEEMOD EMERGENCY DIESEL FIRE PUMP OUTPUT**



# Emergency Diesel Fire Pump Detailed Report

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    - 5.18.1.1. Unmitigated
  - 5.18.2. Sequestration
    - 5.18.2.1. Unmitigated
- 6. Climate Risk Detailed Report
  - 6.1. Climate Risk Summary
  - 6.2. Initial Climate Risk Scores
  - 6.3. Adjusted Climate Risk Scores
  - 6.4. Climate Risk Reduction Measures



## 7. Health and Equity Details

### 7.1. CalEnviroScreen 4.0 Scores

### 7.2. Healthy Places Index Scores

### 7.3. Overall Health & Equity Scores

### 7.4. Health & Equity Measures

### 7.5. Evaluation Scorecard

### 7.6. Health & Equity Custom Measures

## 8. User Changes to Default Data



# 1. Basic Project Information

## 1.1. Basic Project Information

Data Field	Value
Project Name	Emergency Diesel Fire Pump
Operational Year	2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	0.20
Location	Menifee, CA, USA
County	Riverside-South Coast
City	Menifee
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5507
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.7

## 1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
User Defined Industrial	1.00	User Defined Unit	0.00	0.00	0.00	—	—	—



1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.34	0.31	0.87	0.80	< 0.005	0.05	0.00	0.05	0.05	0.00	0.05	0.00	160	160	0.01	< 0.005	0.00	160
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.34	0.31	0.87	0.80	< 0.005	0.05	0.00	0.05	0.05	0.00	0.05	0.00	160	160	0.01	< 0.005	0.00	160
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.05	0.04	0.12	0.11	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	0.00	22.7	22.7	< 0.005	< 0.005	0.00	22.8
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.01	0.01	0.02	0.02	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	3.76	3.76	< 0.005	< 0.005	0.00	3.77

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—



[illegible]



Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Waste	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Stationary	0.01	0.01	0.02	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.77
Total	0.01	0.01	0.02	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.77

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00







4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—



[illegible]

#### 4.4. Water Emissions by Land Use

#### 4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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[illegible]

#### 4.5. Waste Emissions by Land Use

#### 4.5.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)																		
Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00



[illegible]

#### 4.6. Refrigerant Emissions by Land Use

#### 4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

[illegible]

#### 4.7. Offroad Emissions By Equipment Type



4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.34	0.31	0.87	0.80	< 0.005	0.05	—	0.05	0.05	—	0.05	—	160	160	0.01	< 0.005	—	160
Total	0.34	0.31	0.87	0.80	< 0.005	0.05	—	0.05	0.05	—	0.05	—	160	160	0.01	< 0.005	—	160



Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.34	0.31	0.87	0.80	< 0.005	0.05	—	0.05	—	0.05	—	0.01	160	160	0.01	< 0.005	—	160	160
Total	0.34	0.31	0.87	0.80	< 0.005	0.05	—	0.05	—	0.05	—	0.01	160	160	0.01	< 0.005	—	160	160
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.01	0.01	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	< 0.005	—	< 0.005	3.76	3.76	< 0.005	< 0.005	—	3.77	3.77
Total	0.01	0.01	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	< 0.005	—	< 0.005	3.76	3.76	< 0.005	< 0.005	—	3.77	3.77

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—



4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—



## 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

## Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—



Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	0.00	0.00	—

5.10.3. Landscape Equipment

Season	Unit	Value
--------	------	-------



Snow Days	day/yr	0.00
Summer Days	day/yr	0.00

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
User Defined Industrial	0.00	349	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
User Defined Industrial	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
User Defined Industrial	0.00	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Served
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5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Emergency Generator	Diesel	2.00	0.50	26.0	190	0.73

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)
----------------	-----------	--------	--------------------------	------------------------------	------------------------------

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1. Biomass Cover Type



5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
--------------------	---------------	-------------

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
-----------	--------	------------------------------	------------------------------

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	27.8	annual days of extreme heat
Extreme Precipitation	2.60	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	9.89	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi. Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi. Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft. Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.



6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.



The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	88.7
AQ-PM	49.9
AQ-DPM	38.9
Drinking Water	10.2
Lead Risk Housing	9.16
Pesticides	0.00
Toxic Releases	21.9
Traffic	85.7
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	22.1
Haz Waste Facilities/Generators	58.3
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	70.4
Cardio-vascular	93.4



Low Birth Weights	8.60
Socioeconomic Factor Indicators	—
Education	43.1
Housing	79.6
Linguistic	9.46
Poverty	58.9
Unemployment	—

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	47.83780316
Employed	0.859745926
Median HI	13.7944309
Education	—
Bachelor's or higher	28.35878352
High school enrollment	100
Preschool enrollment	18.51661748
Transportation	—
Auto Access	42.71782369
Active commuting	49.45463878
Social	—
2-parent households	87.5914282
Voting	83.07455409
Neighborhood	—
Alcohol availability	91.32554857



Park access	2.194276915
Retail density	24.6888233
Supermarket access	20.23610933
Tree canopy	1.873476197
Housing	—
Homeownership	53.58655203
Housing habitability	51.93122033
Low-inc homeowner severe housing cost burden	84.28076479
Low-inc renter severe housing cost burden	15.01347363
Uncrowded housing	75.52932119
Health Outcomes	—
Insured adults	44.48864365
Arthritis	0.2
Asthma ER Admissions	65.8
High Blood Pressure	0.2
Cancer (excluding skin)	0.2
Asthma	37.3
Coronary Heart Disease	0.2
Chronic Obstructive Pulmonary Disease	0.4
Diagnosed Diabetes	0.9
Life Expectancy at Birth	4.8
Cognitively Disabled	6.4
Physically Disabled	0.3
Heart Attack ER Admissions	21.4
Mental Health Not Good	72.2
Chronic Kidney Disease	0.2
Obesity	41.1



Pedestrian Injuries	52.8
Physical Health Not Good	12.8
Stroke	0.4
Health Risk Behaviors	—
Binge Drinking	99.6
Current Smoker	80.3
No Leisure Time for Physical Activity	20.7
Climate Change Exposures	—
Wildfire Risk	3.5
SLR Inundation Area	0.0
Children	94.0
Elderly	0.5
English Speaking	66.0
Foreign-born	18.5
Outdoor Workers	16.4
Climate Change Adaptive Capacity	—
Impervious Surface Cover	52.2
Traffic Density	61.7
Traffic Access	23.0
Other Indices	—
Hardship	80.3
Other Decision Support	—
2016 Voting	79.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	39.0



Healthy Places Index Score for Project Location (b)	21.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.  
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Operations: Landscape Equipment	o
Operations: Emergency Generators and Fire Pumps	2 emergency diesel generators



**ATTACHMENT B**  
**SUPPLEMENTAL HEALTH RISK ASSESSMENT CALCULATIONS**



Table 1  
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards  
0-2 Age Bin Exposure Scenario - Construction Activity

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk					Noncarcinogenic Hazards/ Toxicological Endpoints**									
					URF (ug/m <sup>3</sup> ) <sup>-1</sup> (f)	CPF (mg/kg/day) <sup>-1</sup> (g)	DOSE (mg/kg-day) <sup>-1</sup> (h)	RISK (i)	REL (ug/m <sup>3</sup> ) (j)	RfD (mg/kg/day) (k)	RESP (l)	CNS/PNS (m)	CV/BL (n)	IMMUN (o)	KIDN (p)	GI/LV (q)	REPRO (r)	EYES (s)	
	(a)	(b)																	(c)
	0.02266	2.27E-05	(d)	(e)	3.0E-04	1.1E+00	1.6E-05	1.9E-06	5.0E+00	1.4E-03	4.5E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
TOTAL								1.9E-06			4.5E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	

\*\* Key to Toxicological Endpoints

- RESP Respiratory System
- CNS/PNS Central/Peripheral Nervous System
- CV/BL Cardiovascular/Blood System
- IMMUN Immune System
- KIDN Kidney
- GI/LV Gastrointestinal System/Liver
- REPRO Reproductive System (e.g. teratogenic and developmental effects)
- EYES Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

- exposure frequency (days/year) 240
- exposure duration (years) 0.92
- inhalation rate ( $\text{L}/\text{kg}/\text{day}$ ) 1090
- inhalation absorption factor 1
- averaging time (years) 70
- fraction of time at home 0.85
- age sensitivity factor (0 to 2 years old) 10



Table 3  
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards  
2-16 Age Bin Exposure Scenario

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk					Noncarcinogenic Hazards/ Toxicological Endpoints**									
					URF (ug/m <sup>3</sup> ) <sup>-1</sup> (f)	CPF (mg/kg/day) <sup>-1</sup> (g)	DOSE (mg/kg-day) <sup>-1</sup> (h)	RISK (i)	REL (ug/m <sup>3</sup> ) (j)	RfD (mg/kg/day) (k)	RESP (l)	CNS/PNS (m)	CV/BL (n)	IMMUN (o)	KIDN (p)	GI/LV (q)	REPRO (r)	EYES (s)	
	(a)	(b)																	(c)
	0.00066	6.60E-07	(d)	(e)	3.0E-04	1.1E+00	3.6E-07	1.6E-07	5.0E+00	1.4E-03	1.3E-04								
TOTAL								1.6E-07			1.3E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	

0.16

\*\* Key to Toxicological Endpoints

- RESP Respiratory System
- CNS/PNS Central/Peripheral Nervous System
- CV/BL Cardiovascular/Blood System
- IMMUN Immune System
- KIDN Kidney
- GI/LV Gastrointestinal System/Liver
- REPRO Reproductive System (e.g. teratogenic and developmental effects)
- EYES Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

- exposure frequency (days/year) 350
- exposure duration (years) 13.23
- inhalation rate ( $\text{L}/\text{kg}/\text{day}$ ) 572
- inhalation absorption factor 1
- averaging time (years) 70
- fraction of time at home 0.72
- age sensitivity factor (ages 2 to 16 years) 3



Table 4  
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards  
16-30 Age Bin Exposure Scenario

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk					Noncarcinogenic Hazards/ Toxicological Endpoints**												
					URF (ug/m <sup>3</sup> ) <sup>-1</sup> (f)	CPF (mg/kg/day) <sup>-1</sup> (g)	DOSE (mg/kg-day) <sup>-1</sup> (h)	RISK (i)	REL (ug/m <sup>3</sup> ) (j)	RfD (mg/kg/day) (k)	RESP (l)	CNS/PNS (m)	CV/BL (n)	IMMUN (o)	KIDN (p)	GI/LV (q)	REPRO (r)	EYES (s)				
	(a)	(b)																	(c)			
		0.00066	6.60E-07	(d)	(e)	3.0E-04	1.1E+00	1.7E-07	2.5E-08	5.0E+00	1.4E-03	1.3E-04										
TOTAL					Diesel Particulate				2.5E-08			1.3E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00			

\*\* Key to Toxicological Endpoints

- RESP Respiratory System
- CNS/PNS Central/Peripheral Nervous System
- CV/BL Cardiovascular/Blood System
- IMMUN Immune System
- KIDN Kidney
- GI/LV Gastrointestinal System/Liver
- REPRO Reproductive System (e.g. teratogenic and developmental effects)
- EYES Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

- exposure frequency (days/year) 350
- exposure duration (years) 14
- inhalation rate (L/kg-day)) 261
- inhalation absorption factor 1
- averaging time (years) 70
- fraction of time at home 0.73
- age sensitivity factor (ages 16 to 30 years old) 1

Total Risk for All Age Bins (per million)

2.08



**Table 5**  
**Quantification of Carcinogenic Risks and Noncarcinogenic Risks**  
**25-Year Worker Exposure Scenario**

	Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**									
		(ug/m <sup>3</sup> )	(mg/m <sup>3</sup> )			URF (ug/m <sup>3</sup> ) <sup>-1</sup>	CPF (g/kg/day) <sup>-1</sup>	DOSE (mg/kg/day)	RISK	REL (ug/m <sup>3</sup> )	RTD (mg/kg/day)	RESP (l)	CNS/PNS (m)	CV/BL (n)	IMMUN (o)	KIDN (p)	GI/LV (q)	REPRO (r)	EYES (s)
1	Diesel Particulates (a)	2.45E-02	2.45E-05	(d) 1.00E+00	(e) Diesel Particulate	3.0E-04	1.1E+00	3.7E-06	5.1E-08	5.0E+00	1.4E-03	4.9E-03							
TOTAL									5.1E-08 0.05			4.9E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

\*\* Key to Toxicological Endpoints

RESP Respiratory System  
 CNS/PNS Central/Peripheral Nervous System  
 CV/BL Cardiovascular/Blood System  
 IMMUN Immune System  
 KIDN Kidney  
 GI/LV Gastrointestinal System/Liver  
 REPRO Reproductive System (e.g. teratogenic and developmental effects)  
 EYES Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year) 240  
 exposure duration (years) 0.92  
 inhalation rate (L/kg-day) 230  
 inhalation absorption factor 1  
 averaging time (years) 70



Table 1  
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards  
-0.25 to 0 Age Bin Exposure Scenario

Source	Mass GLC			Weight Fraction	Contaminant	Carcinogenic Risk					Noncarcinogenic Hazards/ Toxicological Endpoints**												
	(a)		(b)			(c)	(d)	(e)	URF ( $\mu\text{g}/\text{m}^3$ ) <sup>-1</sup> (f)	CPF ( $\text{mg}/\text{kg}/\text{day}$ ) <sup>-1</sup> (g)	DOSE ( $\text{mg}/\text{kg}/\text{day}$ ) <sup>-1</sup> (h)	RISK (i)	REL ( $\mu\text{g}/\text{m}^3$ ) (j)	RfD ( $\text{mg}/\text{kg}/\text{day}$ ) (k)	RESP (l)	CNS/PNS (m)	CV/BL (n)	IMMUN (o)	KIDN (p)	GI/LV (q)	REPRO (r)	EYES (s)	
	(a)	(b)																					
		0.00066	6.60E-07	(d)	(e)	3.0E-04	1.1E+00	2.3E-07	7.3E-09	5.0E+00	1.4E-03	1.3E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00		
TOTAL									7.3E-09				1.3E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00		

\*\* Key to Toxicological Endpoints

- RESP Respiratory System
- CNS/PNS Central/Peripheral Nervous System
- CV/BL Cardiovascular/Blood System
- IMMUN Immune System
- KIDN Kidney
- GI/LV Gastrointestinal System/Liver
- REPRO Reproductive System (e.g. teratogenic and developmental effects)
- EYES Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

- exposure frequency (days/year) 350
- exposure duration (years) 0.25
- inhalation rate ( $\text{L}/\text{kg}/\text{day}$ ) 361
- inhalation absorption factor 1
- averaging time (years) 70
- fraction of time at home 0.85
- age sensitivity factor (age third trimester) 10



Table 2  
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards  
0-2 Age Bin Exposure Scenario

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**										
					URF ( $\mu\text{g}/\text{m}^3$ ) <sup>-1</sup> (f)	CPF ( $\text{mg}/\text{kg}/\text{day}$ ) (g)	DOSE ( $\text{mg}/\text{kg}/\text{day}$ ) (h)	RISK (i)	REL ( $\mu\text{g}/\text{m}^3$ ) (j)	RfD ( $\text{mg}/\text{kg}/\text{day}$ ) (k)	RESP (l)	CNS/PNS (m)	CV/BL (n)	IMMUN (o)	KIDN (p)	GI/LV (q)	REPRO (r)	EYES (s)	
	(a)	(b)																	(c)
	0.00066	6.60E-07	(d)	(e)	3.0E-04	1.1E+00	6.9E-07	1.8E-07	5.0E+00	1.4E-03	1.3E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
TOTAL				Diesel Particulate				1.8E-07			1.3E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	

\*\* Key to Toxicological Endpoints

- |         |  |
|---------|--|
| RESP    | Respiratory System   |
| CNS/PNS | Central/Peripheral Nervous System                                |
| CV/BL   | Cardiovascular/Blood System                                      |
| IMMUN   | Immune System  |
| KIDN    | Kidney   |
| GI/LV   | Gastrointestinal System/Liver                                    |
| REPRO   | Reproductive System (e.g. teratogenic and developmental effects) |
| EYES    | Eye irritation and/or other effects                              |

Note: Exposure factors used to calculate contaminant intake

- |   |      |
|---|------|
| exposure frequency (days/year)                      | 350  |
| exposure duration (years)                           | 2    |
| inhalation rate ( $\text{L}/\text{kg}/\text{day}$ ) | 1090 |
| inhalation absorption factor                        | 1    |
| averaging time (years)                              | 70   |
| fraction of time at home                            | 0.85 |
| age sensitivity factor (0 to 2 years old)           | 10   |



Table 3  
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards  
2-16 Age Bin Exposure Scenario

Source	Mass GLC			Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**													
			URF ( $\mu\text{g}/\text{m}^3$ ) <sup>-1</sup> (f)			CPF ( $\text{mg}/\text{kg}/\text{day}$ ) <sup>-1</sup> (g)	DOSE ( $\text{mg}/\text{kg}/\text{day}$ ) <sup>-1</sup> (h)	RISK (i)	REL ( $\mu\text{g}/\text{m}^3$ ) (j)	RfD ( $\text{mg}/\text{kg}/\text{day}$ ) (k)	RESP (l)	CNS/PNS (m)	CV/BL (n)	IMMUN (o)	KIDN (p)	GI/LV (q)	REPRO (r)	EYES (s)					
	(a)	(b)																	(c)				
	0.00066	6.60E-07		(d)	(e)	3.0E-04	1.1E+00	3.6E-07	1.6E-07	5.0E+00	1.4E-03	1.3E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00					
TOTAL									1.6E-07			1.3E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00					

\*\* Key to Toxicological Endpoints

- RESP Respiratory System
- CNS/PNS Central/Peripheral Nervous System
- CV/BL Cardiovascular/Blood System
- IMMUN Immune System
- KIDN Kidney
- GI/LV Gastrointestinal System/Liver
- REPRO Reproductive System (e.g. teratogenic and developmental effects)
- EYES Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

- exposure frequency (days/year) 350
- exposure duration (years) 14
- inhalation rate ( $\text{L}/\text{kg}/\text{day}$ ) 572
- inhalation absorption factor 1
- averaging time (years) 70
- fraction of time at home 0.72
- age sensitivity factor (ages 2 to 16 years) 3



Table 4  
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards  
16-30 Age Bin Exposure Scenario

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk					Noncarcinogenic Hazards/ Toxicological Endpoints**												
					URF (ug/m <sup>3</sup> ) <sup>-1</sup> (f)	CPF (mg/kg/day) <sup>-1</sup> (g)	DOSE (mg/kg-day) <sup>-1</sup> (h)	RISK (i)	REL (ug/m <sup>3</sup> ) (j)	RfD (mg/kg/day) (k)	RESP (l)	CNS/PNS (m)	CV/BL (n)	IMMUN (o)	KIDN (p)	GI/LV (q)	REPRO (r)	EYES (s)				
	(a)	(b)																	(c)			
		0.00066	6.60E-07	(d)	(e)	3.0E-04	1.1E+00	1.7E-07	2.5E-08	5.0E+00	1.4E-03	1.3E-04										
TOTAL					Diesel Particulate				2.5E-08			1.3E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00			

\*\* Key to Toxicological Endpoints

- |         |  |
|---------|--|
| RESP    | Respiratory System   |
| CNS/PNS | Central/Peripheral Nervous System                                |
| CV/BL   | Cardiovascular/Blood System                                      |
| IMMUN   | Immune System  |
| KIDN    | Kidney   |
| GI/LV   | Gastrointestinal System/Liver                                    |
| REPRO   | Reproductive System (e.g. teratogenic and developmental effects) |
| EYES    | Eye irritation and/or other effects                              |

Note: Exposure factors used to calculate contaminant intake

- |  |      |
|--|------|
| exposure frequency (days/year)                   | 350  |
| exposure duration (years)                        | 14   |
| inhalation rate (L/kg-day)                       | 261  |
| inhalation absorption factor                     | 1    |
| averaging time (years)                           | 70   |
| fraction of time at home                         | 0.73 |
| age sensitivity factor (ages 16 to 30 years old) | 1    |

Total Risk for All Age Bins (per million) 0.37



Table 5  
Quantification of Carcinogenic Risks and Noncarcinogenic Risks  
25-Year Worker Exposure Scenario

	Source	Mass GLC		Weight: Fraction	Contaminant	Carcinogenic Risk					Noncarcinogenic Hazards/ Toxicological Endpoints**									
		(ug/m <sup>3</sup> ) (s)	(mg/m <sup>3</sup> ) (c)			URF (ug/m <sup>3</sup> ) <sup>-1</sup> (f)	CPF (mg/kg/day) <sup>-1</sup> (g)	DOSE (mg/kg/day) <sup>-1</sup> (h)	RISK (i)	REL (ug/m <sup>3</sup> ) (j)	RfD (mg/kg/day) (k)	RESP (l)	CNS/PNS (m)	CV/BL (n)	IMMUN (o)	KIDN (p)	GI/LV (q)	REPRO (r)	EYES (s)	
1	Diesel Particulates	9.60E-04	9.60E-07	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	1.5E-07	5.7E-08	5.0E+00	1.4E-03	1.9E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
TOTAL									5.7E-08 0.06			1.9E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	

\*\* Key to Toxicological Endpoints

RESP Respiratory System  
CNS/PNS Central/Peripheral Nervous System  
CV/BL Cardiovascular/Blood System  
IMMUN Immune System  
KIDN Kidney  
GI/LV Gastrointestinal System/Liver  
REPRO Reproductive System (e.g. teratogenic and developmental effects)  
EYES Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year) 250  
exposure duration (years) 25  
inhalation rate (L/kg-day)) 230  
inhalation absorption factor 1  
averaging time (years) 70



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**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 5/22/2023
** File: C:\Lakes\AERMOD View\14775-04 HRA Modeling Files\14775 Construction\14775
Construction.ADI
**
*****
**
**
*****
** AERMOD Control Pathway
*****
**
**
CO STARTING
  TITLEONE C:\Users\Michael Tirohn\Desktop\HRAS\14775 Ethanac and Barnett\14775
  MODELOPT DFAULT CONC
  AVERTIME ANNUAL
  URBANOPT 2189641 Riverside_County
  POLLUTID DPM
  RUNORNOT RUN
  ERRORFIL "14775 Construction.err"
CO FINISHED
**
*****
** AERMOD Source Pathway
*****
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE6
** DESCRSRC Ethanac 100%
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 0.0009646713
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 482092.273, 3733680.890, 433.00, 3.49, 6.51
** 482570.497, 3733674.016, 434.00, 3.49, 6.51
** -----

```



LOCATION	L0000487	VOLUME	482099.273	3733680.790	433.00
LOCATION	L0000488	VOLUME	482113.271	3733680.589	433.00
LOCATION	L0000489	VOLUME	482127.270	3733680.387	433.00
LOCATION	L0000490	VOLUME	482141.268	3733680.186	433.00
LOCATION	L0000491	VOLUME	482155.267	3733679.985	433.00
LOCATION	L0000492	VOLUME	482169.265	3733679.784	433.00
LOCATION	L0000493	VOLUME	482183.264	3733679.582	433.00
LOCATION	L0000494	VOLUME	482197.262	3733679.381	433.00
LOCATION	L0000495	VOLUME	482211.261	3733679.180	433.00
LOCATION	L0000496	VOLUME	482225.259	3733678.979	433.00
LOCATION	L0000497	VOLUME	482239.258	3733678.777	433.00
LOCATION	L0000498	VOLUME	482253.257	3733678.576	433.00
LOCATION	L0000499	VOLUME	482267.255	3733678.375	433.00
LOCATION	L0000500	VOLUME	482281.254	3733678.174	433.00
LOCATION	L0000501	VOLUME	482295.252	3733677.972	433.00
LOCATION	L0000502	VOLUME	482309.251	3733677.771	433.00
LOCATION	L0000503	VOLUME	482323.249	3733677.570	433.07
LOCATION	L0000504	VOLUME	482337.248	3733677.369	433.36
LOCATION	L0000505	VOLUME	482351.246	3733677.167	433.64
LOCATION	L0000506	VOLUME	482365.245	3733676.966	433.82
LOCATION	L0000507	VOLUME	482379.244	3733676.765	433.99
LOCATION	L0000508	VOLUME	482393.242	3733676.564	434.00
LOCATION	L0000509	VOLUME	482407.241	3733676.363	434.00
LOCATION	L0000510	VOLUME	482421.239	3733676.161	434.00
LOCATION	L0000511	VOLUME	482435.238	3733675.960	434.00
LOCATION	L0000512	VOLUME	482449.236	3733675.759	434.00
LOCATION	L0000513	VOLUME	482463.235	3733675.558	434.00
LOCATION	L0000514	VOLUME	482477.233	3733675.356	434.00
LOCATION	L0000515	VOLUME	482491.232	3733675.155	434.00
LOCATION	L0000516	VOLUME	482505.231	3733674.954	434.00
LOCATION	L0000517	VOLUME	482519.229	3733674.753	434.00
LOCATION	L0000518	VOLUME	482533.228	3733674.551	434.00
LOCATION	L0000519	VOLUME	482547.226	3733674.350	434.00
LOCATION	L0000520	VOLUME	482561.225	3733674.149	434.00

\*\* End of LINE VOLUME Source ID = SLINE6

LOCATION	VOL1	VOLUME	481940.900	3733621.669	433.000
LOCATION	VOL2	VOLUME	481940.221	3733565.836	433.000
LOCATION	VOL3	VOLUME	481939.881	3733510.679	433.000
LOCATION	VOL4	VOLUME	481940.221	3733454.841	433.000
LOCATION	VOL5	VOLUME	481940.221	3733399.004	433.000
LOCATION	VOL6	VOLUME	481940.562	3733342.826	433.000
LOCATION	VOL7	VOLUME	481939.540	3733286.988	433.000
LOCATION	VOL8	VOLUME	481950.776	3733232.512	433.000
LOCATION	VOL9	VOLUME	481967.800	3733207.317	433.000
LOCATION	VOL10	VOLUME	481994.697	3733262.814	433.000
LOCATION	VOL11	VOLUME	481994.357	3733318.311	433.000
LOCATION	VOL12	VOLUME	482046.109	3733305.714	433.000
LOCATION	VOL13	VOLUME	481993.676	3733374.149	433.000
LOCATION	VOL14	VOLUME	481993.676	3733429.646	433.000
LOCATION	VOL15	VOLUME	481994.016	3733484.803	433.000



LOCATION VOL16	VOLUME	481994.697	3733527.022	433.000
LOCATION VOL17	VOLUME	482043.385	3733526.682	433.000
LOCATION VOL18	VOLUME	482043.725	3733471.525	433.000
LOCATION VOL19	VOLUME	482046.109	3733361.211	433.000
LOCATION VOL20	VOLUME	482044.406	3733417.049	433.000

\*\*

Line Source Represented by Adjacent Volume Sources

LINE VOLUME Source ID = SLINE7

DESCRSRC

PREFIX

Length of Side = 8.59

Configuration = Adjacent

Emission Rate = 0.0009646713

Vertical Dimension = 6.99

SZINIT = 3.25

Nodes = 2

482092.636, 3733667.305, 433.00, 3.49, 4.00

482089.337, 3733275.697, 433.00, 3.49, 4.00

\*\*

LOCATION L0000351	VOLUME	482092.600	3733663.011	433.00
LOCATION L0000352	VOLUME	482092.527	3733654.421	433.00
LOCATION L0000353	VOLUME	482092.455	3733645.831	433.00
LOCATION L0000354	VOLUME	482092.383	3733637.242	433.00
LOCATION L0000355	VOLUME	482092.310	3733628.652	433.00
LOCATION L0000356	VOLUME	482092.238	3733620.062	433.00
LOCATION L0000357	VOLUME	482092.166	3733611.472	433.00
LOCATION L0000358	VOLUME	482092.093	3733602.883	433.00
LOCATION L0000359	VOLUME	482092.021	3733594.293	433.00
LOCATION L0000360	VOLUME	482091.948	3733585.703	433.00
LOCATION L0000361	VOLUME	482091.876	3733577.114	433.00
LOCATION L0000362	VOLUME	482091.804	3733568.524	433.00
LOCATION L0000363	VOLUME	482091.731	3733559.934	433.00
LOCATION L0000364	VOLUME	482091.659	3733551.345	433.00
LOCATION L0000365	VOLUME	482091.587	3733542.755	433.00
LOCATION L0000366	VOLUME	482091.514	3733534.165	433.00
LOCATION L0000367	VOLUME	482091.442	3733525.576	433.00
LOCATION L0000368	VOLUME	482091.370	3733516.986	433.00
LOCATION L0000369	VOLUME	482091.297	3733508.396	433.00
LOCATION L0000370	VOLUME	482091.225	3733499.806	433.00
LOCATION L0000371	VOLUME	482091.153	3733491.217	433.00
LOCATION L0000372	VOLUME	482091.080	3733482.627	433.00
LOCATION L0000373	VOLUME	482091.008	3733474.037	433.00
LOCATION L0000374	VOLUME	482090.936	3733465.448	433.00
LOCATION L0000375	VOLUME	482090.863	3733456.858	433.00
LOCATION L0000376	VOLUME	482090.791	3733448.268	433.00
LOCATION L0000377	VOLUME	482090.718	3733439.679	433.00
LOCATION L0000378	VOLUME	482090.646	3733431.089	433.00
LOCATION L0000379	VOLUME	482090.574	3733422.499	433.00
LOCATION L0000380	VOLUME	482090.501	3733413.909	433.00
LOCATION L0000381	VOLUME	482090.429	3733405.320	433.00



LOCATION	L0000382	VOLUME	482090.357	3733396.730	433.00
LOCATION	L0000383	VOLUME	482090.284	3733388.140	433.00
LOCATION	L0000384	VOLUME	482090.212	3733379.551	433.00
LOCATION	L0000385	VOLUME	482090.140	3733370.961	433.00
LOCATION	L0000386	VOLUME	482090.067	3733362.371	433.00
LOCATION	L0000387	VOLUME	482089.995	3733353.782	433.00
LOCATION	L0000388	VOLUME	482089.923	3733345.192	433.00
LOCATION	L0000389	VOLUME	482089.850	3733336.602	433.00
LOCATION	L0000390	VOLUME	482089.778	3733328.013	433.00
LOCATION	L0000391	VOLUME	482089.705	3733319.423	433.00
LOCATION	L0000392	VOLUME	482089.633	3733310.833	433.00
LOCATION	L0000393	VOLUME	482089.561	3733302.243	433.00
LOCATION	L0000394	VOLUME	482089.488	3733293.654	433.00
LOCATION	L0000395	VOLUME	482089.416	3733285.064	433.00
LOCATION	L0000396	VOLUME	482089.344	3733276.474	433.00

\*\* End of LINE VOLUME Source ID = SLINE7

\*\* Source Parameters \*\*

\*\* LINE VOLUME Source ID = SLINE6

SRCPARAM	L0000487	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000488	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000489	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000490	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000491	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000492	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000493	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000494	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000495	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000496	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000497	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000498	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000499	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000500	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000501	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000502	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000503	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000504	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000505	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000506	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000507	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000508	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000509	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000510	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000511	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000512	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000513	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000514	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000515	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000516	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000517	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000518	0.0000283727	3.49	6.51	3.25



SRCPARAM	L0000519	0.0000283727	3.49	6.51	3.25
SRCPARAM	L0000520	0.0000283727	3.49	6.51	3.25

\*\*

SRCPARAM	VOL1	0.0013633365	5.000	12.828	1.400
SRCPARAM	VOL2	0.0013633365	5.000	12.828	1.400
SRCPARAM	VOL3	0.0013633365	5.000	12.828	1.400
SRCPARAM	VOL4	0.0013633365	5.000	12.828	1.400
SRCPARAM	VOL5	0.0013633365	5.000	12.828	1.400
SRCPARAM	VOL6	0.0013633365	5.000	12.828	1.400
SRCPARAM	VOL7	0.0013633365	5.000	12.828	1.400
SRCPARAM	VOL8	0.0013633365	5.000	12.828	1.400
SRCPARAM	VOL9	0.0013633365	5.000	12.828	1.400
SRCPARAM	VOL10	0.0013633365	5.000	12.828	1.400
SRCPARAM	VOL11	0.0013633365	5.000	12.828	1.400
SRCPARAM	VOL12	0.0013633365	5.000	12.828	1.400
SRCPARAM	VOL13	0.0013633365	5.000	12.828	1.400
SRCPARAM	VOL14	0.0013633365	5.000	12.828	1.400
SRCPARAM	VOL15	0.0013633365	5.000	12.828	1.400
SRCPARAM	VOL16	0.0013633365	5.000	12.828	1.400
SRCPARAM	VOL17	0.0013633365	5.000	12.828	1.400
SRCPARAM	VOL18	0.0013633365	5.000	12.828	1.400
SRCPARAM	VOL19	0.0013633365	5.000	12.828	1.400
SRCPARAM	VOL20	0.0013633365	5.000	12.828	1.400

\*\* LINE VOLUME Source ID = SLINE7

SRCPARAM	L0000351	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000352	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000353	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000354	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000355	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000356	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000357	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000358	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000359	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000360	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000361	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000362	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000363	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000364	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000365	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000366	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000367	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000368	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000369	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000370	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000371	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000372	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000373	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000374	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000375	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000376	0.0000209711	3.49	4.00	3.25



SRCPARAM	L0000377	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000378	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000379	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000380	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000381	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000382	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000383	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000384	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000385	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000386	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000387	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000388	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000389	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000390	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000391	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000392	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000393	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000394	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000395	0.0000209711	3.49	4.00	3.25
SRCPARAM	L0000396	0.0000209711	3.49	4.00	3.25

\*\*

-----  
 URBANSRC ALL

\*\* Variable Emissions Type: "By Hour / Day (HRDOW)"

\*\* Variable Emission Scenario: "Scenario 1"

\*\* WeekDays:

EMISFACT	L0000487	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	L0000487	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	L0000487	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	L0000487	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	L0000488	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	L0000488	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	L0000488	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	L0000488	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	L0000489	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	L0000489	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	L0000489	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	L0000489	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	L0000490	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	L0000490	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	L0000490	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	L0000490	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	L0000491	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	L0000491	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	L0000491	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	L0000491	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	L0000492	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	L0000492	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	L0000492	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	L0000492	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0



[illegible]



[illegible]



EMISFACT	L0000518	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	L0000518	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	L0000518	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	L0000518	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	L0000519	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	L0000519	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	L0000519	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	L0000519	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	L0000520	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	L0000520	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	L0000520	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	L0000520	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0



[illegible]



[illegible]

**\*\* Sunday:**



[illegible]



[illegible]



[illegible]



EMISFACT VOL1	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:	
EMISFACT VOL2	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL2	HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT VOL2	HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT VOL2	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:	
EMISFACT VOL2	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL2	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL2	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL2	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:	
EMISFACT VOL2	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL2	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL2	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL2	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:	
EMISFACT VOL3	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL3	HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT VOL3	HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT VOL3	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:	
EMISFACT VOL3	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL3	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL3	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL3	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:	
EMISFACT VOL3	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL3	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL3	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL3	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:	
EMISFACT VOL4	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL4	HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT VOL4	HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT VOL4	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:	
EMISFACT VOL4	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL4	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL4	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL4	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:	
EMISFACT VOL4	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL4	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL4	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL4	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:	
EMISFACT VOL5	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL5	HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT VOL5	HRDOW 1.0 1.0 1.0 1.0 0.0 0.0



[illegible]



EMISFACT VOL8	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:	
EMISFACT VOL8	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL8	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL8	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL8	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:	
EMISFACT VOL9	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL9	HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT VOL9	HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT VOL9	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:	
EMISFACT VOL9	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL9	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL9	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL9	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:	
EMISFACT VOL9	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL9	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL9	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL9	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:	
EMISFACT VOL10	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL10	HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT VOL10	HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT VOL10	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:	
EMISFACT VOL10	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL10	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL10	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL10	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:	
EMISFACT VOL10	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL10	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL10	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL10	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:	
EMISFACT VOL11	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL11	HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT VOL11	HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT VOL11	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:	
EMISFACT VOL11	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL11	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL11	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL11	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:	
EMISFACT VOL11	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL11	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL11	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0



[illegible]



[illegible]



EMISFACT VOL18	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:	
EMISFACT VOL18	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL18	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL18	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL18	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:	
EMISFACT VOL19	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL19	HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT VOL19	HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT VOL19	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:	
EMISFACT VOL19	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL19	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL19	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL19	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:	
EMISFACT VOL19	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL19	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL19	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL19	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:	
EMISFACT VOL20	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL20	HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT VOL20	HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT VOL20	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:	
EMISFACT VOL20	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL20	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL20	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL20	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:	
EMISFACT VOL20	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL20	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL20	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL20	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:	
EMISFACT L0000351	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000351	HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000351	HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000351	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000352	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000352	HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000352	HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000352	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000353	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000353	HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000353	HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000353	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000354	HRDOW 0.0 0.0 0.0 0.0 0.0 0.0



[illegible]



[illegible]



[illegible]



EMISFACT	L0000391	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	L0000392	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	L0000392	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	L0000392	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	L0000392	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	L0000393	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	L0000393	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	L0000393	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	L0000393	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	L0000394	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	L0000394	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	L0000394	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	L0000394	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	L0000395	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	L0000395	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	L0000395	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	L0000395	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	L0000396	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	L0000396	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	L0000396	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	L0000396	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0



[illegible]



[illegible]



[illegible]



[illegible]



[illegible]



[illegible]







INCLUDED "14775 Construction.rou"

RE FINISHED

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\*\*\*\*\*

\*\* AERMOD Meteorology Pathway

\*\*\*\*\*

\*\*

\*\*

ME STARTING

SURFFILE PERI\_V9\_ADJU\PERI\_v9.SFC

PROFFILE PERI\_V9\_ADJU\PERI\_v9.PFL

SURFDATA 3171 2010

UAIRDATA 3190 2010

SITEDATA 99999 2010

PROFBASE 442.0 METERS

ME FINISHED

\*\*

\*\*\*\*\*

\*\* AERMOD Output Pathway

\*\*\*\*\*

\*\*

\*\*

OU STARTING

\*\* Auto-Generated Plotfiles

PLOTFILE ANNUAL ALL "14775 CONSTRUCTION.AD\AN00GALL.PLT" 31

SUMMFILE "14775 Construction.sum"

OU FINISHED

\*\*\* Message Summary For AERMOD Model Setup \*\*\*

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)

A Total of 2 Warning Message(s)

A Total of 0 Informational Message(s)

\*\*\*\*\* FATAL ERROR MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

ME W186 1565 MEOPEN: THRESH\_1MIN 1-min ASOS wind speed threshold used  
0.50

ME W187 1565 MEOPEN: ADJ\_U\* Option for Stable Low Winds used in AERMET

\*\*\*\*\*

\*\*\* SETUP Finishes Successfully \*\*\*



\*\*\*\*\*

▲ \*\*\* AERMOD - VERSION 22112 \*\*\* \*\*\* C:\Users\Michael Tirohn\Desktop\HRAs\14775  
Ethanac and Barnett\14775 \*\*\* 05/22/23  
\*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
\*\*\* 13:11:59

PAGE 1  
\*\*\* MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ\_U\*

\*\*\* MODEL SETUP OPTIONS SUMMARY

\*\*\*

-- -- -- -- --  
\*\* Model Options Selected:

- \* Model Uses Regulatory DEFAULT Options
- \* Model Is Setup For Calculation of Average CONCentration Values.
- \* NO GAS DEPOSITION Data Provided.
- \* NO PARTICLE DEPOSITION Data Provided.
- \* Model Uses NO DRY DEPLETION. DDPLETE = F
- \* Model Uses NO WET DEPLETION. WETDPLT = F
- \* Stack-tip Downwash.
- \* Model Accounts for ELEVated Terrain Effects.
- \* Use Calms Processing Routine.
- \* Use Missing Data Processing Routine.
- \* No Exponential Decay.
- \* Model Uses URBAN Dispersion Algorithm for the SBL for 100 Source(s),  
for Total of 1 Urban Area(s):  
Urban Population = 2189641.0 ; Urban Roughness Length = 1.000 m
- \* Urban Roughness Length of 1.0 Meter Used.
- \* ADJ\_U\* - Use ADJ\_U\* option for SBL in AERMET
- \* CCVR\_Sub - Meteorological data includes CCVR substitutions
- \* TEMP\_Sub - Meteorological data includes TEMP substitutions
- \* Model Assumes No FLAGPOLE Receptor Heights.
- \* The User Specified a Pollutant Type of: DPM

\*\*Model Calculates ANNUAL Averages Only

\*\*This Run Includes: 100 Source(s); 1 Source Group(s); and 25  
Receptor(s)

with: 0 POINT(s), including  
0 POINTCAP(s) and 0 POINTHOR(s)  
and: 100 VOLUME source(s)  
and: 0 AREA type source(s)  
and: 0 LINE source(s)  
and: 0 RLINE/RLINEXT source(s)  
and: 0 OPENPIT source(s)  
and: 0 BUOYANT LINE source(s) with a total of 0 line(s)



and: 0 SWPOINT source(s)

\*\*Model Set To Continue RUNNING After the Setup Testing.

\*\*The AERMET Input Meteorological Data Version Date: 16216

\*\*Output Options Selected:

Model Outputs Tables of ANNUAL Averages by Receptor

Keyword) Model Outputs External File(s) of High Values for Plotting (PLOTFILE

Keyword) Model Outputs Separate Summary File of High Ranked Values (SUMMFILE

\*\*NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours  
m for Missing  
Hours  
b for Both Calm  
and Missing Hours

\*\*Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 442.00 ; Decay  
Coef. = 0.000 ; Rot. Angle = 0.0  
Emission Units = GRAMS/SEC ;  
Emission Rate Unit Factor = 0.10000E+07  
Output Units = MICROGRAMS/M\*\*3

\*\*Approximate Storage Requirements of Model = 3.6 MB of RAM.

\*\*Input Runstream File: aermod.inp

\*\*Output Print File: aermod.out

\*\*Detailed Error/Message File: 14775 Construction.err

\*\*File for Summary of Results: 14775 Construction.sum

▲ \*\*\* AERMOD - VERSION 22112 \*\*\* \*\*\* C:\Users\Michael Tirohn\Desktop\HRAs\14775  
Ethanac and Barnett\14775 \*\*\* 05/22/23  
\*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
\*\*\* 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\*\*\* VOLUME SOURCE DATA \*\*\*

	NUMBER	EMISSION	RATE	BASE	RELEASE	INIT.
INIT.	URBAN	EMISSION	RATE			



SOURCE	PART.	(GRAMS/SEC)	X	Y	ELEV.	HEIGHT	SY
SZ	SOURCE	SCALAR	VARY				
ID	CATS.		(METERS)	(METERS)	(METERS)	(METERS)	(METERS)
(METERS)	BY						

-----

L0000487	0	0.28373E-04	482099.3	3733680.8	433.0	3.49	6.51
3.25	YES	HRDOW					
L0000488	0	0.28373E-04	482113.3	3733680.6	433.0	3.49	6.51
3.25	YES	HRDOW					
L0000489	0	0.28373E-04	482127.3	3733680.4	433.0	3.49	6.51
3.25	YES	HRDOW					
L0000490	0	0.28373E-04	482141.3	3733680.2	433.0	3.49	6.51
3.25	YES	HRDOW					
L0000491	0	0.28373E-04	482155.3	3733680.0	433.0	3.49	6.51
3.25	YES	HRDOW					
L0000492	0	0.28373E-04	482169.3	3733679.8	433.0	3.49	6.51
3.25	YES	HRDOW					
L0000493	0	0.28373E-04	482183.3	3733679.6	433.0	3.49	6.51
3.25	YES	HRDOW					
L0000494	0	0.28373E-04	482197.3	3733679.4	433.0	3.49	6.51
3.25	YES	HRDOW					
L0000495	0	0.28373E-04	482211.3	3733679.2	433.0	3.49	6.51
3.25	YES	HRDOW					
L0000496	0	0.28373E-04	482225.3	3733679.0	433.0	3.49	6.51
3.25	YES	HRDOW					
L0000497	0	0.28373E-04	482239.3	3733678.8	433.0	3.49	6.51
3.25	YES	HRDOW					
L0000498	0	0.28373E-04	482253.3	3733678.6	433.0	3.49	6.51
3.25	YES	HRDOW					
L0000499	0	0.28373E-04	482267.3	3733678.4	433.0	3.49	6.51
3.25	YES	HRDOW					
L0000500	0	0.28373E-04	482281.3	3733678.2	433.0	3.49	6.51
3.25	YES	HRDOW					
L0000501	0	0.28373E-04	482295.3	3733678.0	433.0	3.49	6.51
3.25	YES	HRDOW					
L0000502	0	0.28373E-04	482309.3	3733677.8	433.0	3.49	6.51
3.25	YES	HRDOW					
L0000503	0	0.28373E-04	482323.2	3733677.6	433.1	3.49	6.51
3.25	YES	HRDOW					
L0000504	0	0.28373E-04	482337.2	3733677.4	433.4	3.49	6.51
3.25	YES	HRDOW					
L0000505	0	0.28373E-04	482351.2	3733677.2	433.6	3.49	6.51
3.25	YES	HRDOW					
L0000506	0	0.28373E-04	482365.2	3733677.0	433.8	3.49	6.51
3.25	YES	HRDOW					
L0000507	0	0.28373E-04	482379.2	3733676.8	434.0	3.49	6.51
3.25	YES	HRDOW					
L0000508	0	0.28373E-04	482393.2	3733676.6	434.0	3.49	6.51



3.25	YES	HRDOW						
L0000509		0	0.28373E-04	482407.2	3733676.4	434.0	3.49	6.51
3.25	YES	HRDOW						
L0000510		0	0.28373E-04	482421.2	3733676.2	434.0	3.49	6.51
3.25	YES	HRDOW						
L0000511		0	0.28373E-04	482435.2	3733676.0	434.0	3.49	6.51
3.25	YES	HRDOW						
L0000512		0	0.28373E-04	482449.2	3733675.8	434.0	3.49	6.51
3.25	YES	HRDOW						
L0000513		0	0.28373E-04	482463.2	3733675.6	434.0	3.49	6.51
3.25	YES	HRDOW						
L0000514		0	0.28373E-04	482477.2	3733675.4	434.0	3.49	6.51
3.25	YES	HRDOW						
L0000515		0	0.28373E-04	482491.2	3733675.2	434.0	3.49	6.51
3.25	YES	HRDOW						
L0000516		0	0.28373E-04	482505.2	3733675.0	434.0	3.49	6.51
3.25	YES	HRDOW						
L0000517		0	0.28373E-04	482519.2	3733674.8	434.0	3.49	6.51
3.25	YES	HRDOW						
L0000518		0	0.28373E-04	482533.2	3733674.6	434.0	3.49	6.51
3.25	YES	HRDOW						
L0000519		0	0.28373E-04	482547.2	3733674.3	434.0	3.49	6.51
3.25	YES	HRDOW						
L0000520		0	0.28373E-04	482561.2	3733674.1	434.0	3.49	6.51
3.25	YES	HRDOW						
VOL1		0	0.13633E-02	481940.9	3733621.7	433.0	5.00	12.83
1.40	YES	HRDOW						
VOL2		0	0.13633E-02	481940.2	3733565.8	433.0	5.00	12.83
1.40	YES	HRDOW						
VOL3		0	0.13633E-02	481939.9	3733510.7	433.0	5.00	12.83
1.40	YES	HRDOW						
VOL4		0	0.13633E-02	481940.2	3733454.8	433.0	5.00	12.83
1.40	YES	HRDOW						
VOL5		0	0.13633E-02	481940.2	3733399.0	433.0	5.00	12.83
1.40	YES	HRDOW						
VOL6		0	0.13633E-02	481940.6	3733342.8	433.0	5.00	12.83
1.40	YES	HRDOW						

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\*\*\* VOLUME SOURCE DATA \*\*\*

INIT.	URBAN	NUMBER EMISSION RATE	EMISSION RATE	BASE	RELEASE	INIT.
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SOURCE SZ	SOURCE ID	PART. SCALAR	(GRAMS/SEC) VARY CATS. BY	X (METERS)	Y (METERS)	ELEV. (METERS)	HEIGHT (METERS)	SY (METERS)
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VOL7		0	0.13633E-02	481939.5	3733287.0	433.0	5.00	12.83
1.40	YES	HRDOW						
VOL8		0	0.13633E-02	481950.8	3733232.5	433.0	5.00	12.83
1.40	YES	HRDOW						
VOL9		0	0.13633E-02	481967.8	3733207.3	433.0	5.00	12.83
1.40	YES	HRDOW						
VOL10		0	0.13633E-02	481994.7	3733262.8	433.0	5.00	12.83
1.40	YES	HRDOW						
VOL11		0	0.13633E-02	481994.4	3733318.3	433.0	5.00	12.83
1.40	YES	HRDOW						
VOL12		0	0.13633E-02	482046.1	3733305.7	433.0	5.00	12.83
1.40	YES	HRDOW						
VOL13		0	0.13633E-02	481993.7	3733374.1	433.0	5.00	12.83
1.40	YES	HRDOW						
VOL14		0	0.13633E-02	481993.7	3733429.6	433.0	5.00	12.83
1.40	YES	HRDOW						
VOL15		0	0.13633E-02	481994.0	3733484.8	433.0	5.00	12.83
1.40	YES	HRDOW						
VOL16		0	0.13633E-02	481994.7	3733527.0	433.0	5.00	12.83
1.40	YES	HRDOW						
VOL17		0	0.13633E-02	482043.4	3733526.7	433.0	5.00	12.83
1.40	YES	HRDOW						
VOL18		0	0.13633E-02	482043.7	3733471.5	433.0	5.00	12.83
1.40	YES	HRDOW						
VOL19		0	0.13633E-02	482046.1	3733361.2	433.0	5.00	12.83
1.40	YES	HRDOW						
VOL20		0	0.13633E-02	482044.4	3733417.0	433.0	5.00	12.83
1.40	YES	HRDOW						
L0000351		0	0.20971E-04	482092.6	3733663.0	433.0	3.49	4.00
3.25	YES	HRDOW						
L0000352		0	0.20971E-04	482092.5	3733654.4	433.0	3.49	4.00
3.25	YES	HRDOW						
L0000353		0	0.20971E-04	482092.5	3733645.8	433.0	3.49	4.00
3.25	YES	HRDOW						
L0000354		0	0.20971E-04	482092.4	3733637.2	433.0	3.49	4.00
3.25	YES	HRDOW						
L0000355		0	0.20971E-04	482092.3	3733628.7	433.0	3.49	4.00
3.25	YES	HRDOW						
L0000356		0	0.20971E-04	482092.2	3733620.1	433.0	3.49	4.00
3.25	YES	HRDOW						
L0000357		0	0.20971E-04	482092.2	3733611.5	433.0	3.49	4.00
3.25	YES	HRDOW						
L0000358		0	0.20971E-04	482092.1	3733602.9	433.0	3.49	4.00



3.25	YES	HRDOW						
L0000359	0	0.20971E-04	482092.0	3733594.3	433.0	3.49	4.00	
3.25	YES	HRDOW						
L0000360	0	0.20971E-04	482091.9	3733585.7	433.0	3.49	4.00	
3.25	YES	HRDOW						
L0000361	0	0.20971E-04	482091.9	3733577.1	433.0	3.49	4.00	
3.25	YES	HRDOW						
L0000362	0	0.20971E-04	482091.8	3733568.5	433.0	3.49	4.00	
3.25	YES	HRDOW						
L0000363	0	0.20971E-04	482091.7	3733559.9	433.0	3.49	4.00	
3.25	YES	HRDOW						
L0000364	0	0.20971E-04	482091.7	3733551.3	433.0	3.49	4.00	
3.25	YES	HRDOW						
L0000365	0	0.20971E-04	482091.6	3733542.8	433.0	3.49	4.00	
3.25	YES	HRDOW						
L0000366	0	0.20971E-04	482091.5	3733534.2	433.0	3.49	4.00	
3.25	YES	HRDOW						
L0000367	0	0.20971E-04	482091.4	3733525.6	433.0	3.49	4.00	
3.25	YES	HRDOW						
L0000368	0	0.20971E-04	482091.4	3733517.0	433.0	3.49	4.00	
3.25	YES	HRDOW						
L0000369	0	0.20971E-04	482091.3	3733508.4	433.0	3.49	4.00	
3.25	YES	HRDOW						
L0000370	0	0.20971E-04	482091.2	3733499.8	433.0	3.49	4.00	
3.25	YES	HRDOW						
L0000371	0	0.20971E-04	482091.2	3733491.2	433.0	3.49	4.00	
3.25	YES	HRDOW						
L0000372	0	0.20971E-04	482091.1	3733482.6	433.0	3.49	4.00	
3.25	YES	HRDOW						
L0000373	0	0.20971E-04	482091.0	3733474.0	433.0	3.49	4.00	
3.25	YES	HRDOW						
L0000374	0	0.20971E-04	482090.9	3733465.4	433.0	3.49	4.00	
3.25	YES	HRDOW						
L0000375	0	0.20971E-04	482090.9	3733456.9	433.0	3.49	4.00	
3.25	YES	HRDOW						
L0000376	0	0.20971E-04	482090.8	3733448.3	433.0	3.49	4.00	

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\*\*\* VOLUME SOURCE DATA \*\*\*

INIT.	URBAN	NUMBER EMISSION RATE	EMISSION RATE	BASE	RELEASE	INIT.
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SOURCE SZ	SOURCE ID	PART. SCALAR	(GRAMS/SEC) VARY CATS. BY	X (METERS)	Y (METERS)	ELEV. (METERS)	HEIGHT (METERS)	SY (METERS)
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L0000377		0	0.20971E-04	482090.7	3733439.7	433.0	3.49	4.00
3.25	YES	HRDOW						
L0000378		0	0.20971E-04	482090.6	3733431.1	433.0	3.49	4.00
3.25	YES	HRDOW						
L0000379		0	0.20971E-04	482090.6	3733422.5	433.0	3.49	4.00
3.25	YES	HRDOW						
L0000380		0	0.20971E-04	482090.5	3733413.9	433.0	3.49	4.00
3.25	YES	HRDOW						
L0000381		0	0.20971E-04	482090.4	3733405.3	433.0	3.49	4.00
3.25	YES	HRDOW						
L0000382		0	0.20971E-04	482090.4	3733396.7	433.0	3.49	4.00
3.25	YES	HRDOW						
L0000383		0	0.20971E-04	482090.3	3733388.1	433.0	3.49	4.00
3.25	YES	HRDOW						
L0000384		0	0.20971E-04	482090.2	3733379.6	433.0	3.49	4.00
3.25	YES	HRDOW						
L0000385		0	0.20971E-04	482090.1	3733371.0	433.0	3.49	4.00
3.25	YES	HRDOW						
L0000386		0	0.20971E-04	482090.1	3733362.4	433.0	3.49	4.00
3.25	YES	HRDOW						
L0000387		0	0.20971E-04	482090.0	3733353.8	433.0	3.49	4.00
3.25	YES	HRDOW						
L0000388		0	0.20971E-04	482089.9	3733345.2	433.0	3.49	4.00
3.25	YES	HRDOW						
L0000389		0	0.20971E-04	482089.8	3733336.6	433.0	3.49	4.00
3.25	YES	HRDOW						
L0000390		0	0.20971E-04	482089.8	3733328.0	433.0	3.49	4.00
3.25	YES	HRDOW						
L0000391		0	0.20971E-04	482089.7	3733319.4	433.0	3.49	4.00
3.25	YES	HRDOW						
L0000392		0	0.20971E-04	482089.6	3733310.8	433.0	3.49	4.00
3.25	YES	HRDOW						
L0000393		0	0.20971E-04	482089.6	3733302.2	433.0	3.49	4.00
3.25	YES	HRDOW						
L0000394		0	0.20971E-04	482089.5	3733293.7	433.0	3.49	4.00
3.25	YES	HRDOW						
L0000395		0	0.20971E-04	482089.4	3733285.1	433.0	3.49	4.00
3.25	YES	HRDOW						
L0000396		0	0.20971E-04	482089.3	3733276.5	433.0	3.49	4.00
3.25	YES	HRDOW						

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\*\*\* MODELOPTs: RegDFault CONC ELEV URBAN ADJ\_U\*

\*\*\* SOURCE IDs DEFINING SOURCE GROUPS

\*\*\*

SRCGROUP ID	SOURCE IDs
-----	-----
ALL	L0000487 , L0000488 , L0000489 , L0000490 , L0000491 ,
L0000492	, L0000493 , L0000494 ,
	L0000495 , L0000496 , L0000497 , L0000498 , L0000499 ,
L0000500	, L0000501 , L0000502 ,
	L0000503 , L0000504 , L0000505 , L0000506 , L0000507 ,
L0000508	, L0000509 , L0000510 ,
	L0000511 , L0000512 , L0000513 , L0000514 , L0000515 ,
L0000516	, L0000517 , L0000518 ,
	L0000519 , L0000520 , VOL1 , VOL2 , VOL3 ,
VOL4	, VOL5 , VOL6 ,
	VOL7 , VOL8 , VOL9 , VOL10 , VOL11 ,
VOL12	, VOL13 , VOL14 ,
	VOL15 , VOL16 , VOL17 , VOL18 , VOL19 ,
VOL20	, L0000351 , L0000352 ,
	L0000353 , L0000354 , L0000355 , L0000356 , L0000357 ,
L0000358	, L0000359 , L0000360 ,
	L0000361 , L0000362 , L0000363 , L0000364 , L0000365 ,
L0000366	, L0000367 , L0000368 ,
	L0000369 , L0000370 , L0000371 , L0000372 , L0000373 ,
L0000374	, L0000375 , L0000376 ,
	L0000377 , L0000378 , L0000379 , L0000380 , L0000381 ,
L0000382	, L0000383 , L0000384 ,
	L0000385 , L0000386 , L0000387 , L0000388 , L0000389 ,
L0000390	, L0000391 , L0000392 ,
	L0000393 , L0000394 , L0000395 , L0000396 ,



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\*\*\* MODELOPTs:      RegDFAULT    CONC    ELEV    URBAN    ADJ\_U\*  
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\*\*\* SOURCE IDs DEFINED AS URBAN SOURCES

\*\*\*

URBAN ID	URBAN POP	SOURCE IDs
-----	-----	-----
L0000491 L0000494	2189641. , L0000492 ,	L0000487 , L0000488 , L0000489 , L0000490 , , L0000493 , ,
L0000500	L0000495 , L0000501 , L0000501	, L0000496 , L0000497 , L0000498 , L0000499 , , L0000502 ,
L0000508	L0000503 , L0000509 , L0000509	, L0000504 , L0000505 , L0000506 , L0000507 , , L0000510 ,
L0000516	L0000511 , L0000517 , L0000517	, L0000512 , L0000513 , L0000514 , L0000515 , , L0000518 ,
VOL4	L0000519 , VOL5 , VOL5	, L0000520 , VOL1 , VOL2 , VOL3 , , VOL6 ,
VOL12	VOL7 , VOL13 , VOL13	, VOL8 , VOL9 , VOL10 , VOL11 , , VOL14 ,
VOL20	VOL15 , L0000351 , L0000351	, VOL16 , VOL17 , VOL18 , VOL19 , , L0000352 ,
L0000358	L0000353 , L0000359 , L0000359	, L0000354 , L0000355 , L0000356 , L0000357 , , L0000360 ,
L0000366	L0000361 , L0000367 , L0000367	, L0000362 , L0000363 , L0000364 , L0000365 , , L0000368 ,
L0000374	L0000369 , L0000375 , L0000375	, L0000370 , L0000371 , L0000372 , L0000373 , , L0000376 ,
L0000382	L0000377 , L0000383 , L0000383	, L0000378 , L0000379 , L0000380 , L0000381 , , L0000384 ,



L0000385 , L0000386 , L0000387 , L0000388 , L0000389 ,  
L0000390 , L0000391 , L0000392 ,

L0000393 , L0000394 , L0000395 , L0000396 ,  
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\*\*\* MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000487 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR  
-----  
DAY OF WEEK = WEEKDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00  
DAY OF WEEK = SATURDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00  
DAY OF WEEK = SUNDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

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\*\*\* MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY



OF WEEK (HRDOW) \*

SOURCE ID = L0000488 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR

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DAY OF WEEK = WEEKDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000489 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR

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-----  
DAY OF WEEK = WEEKDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00



22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

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\*\*\* MODELOPTs: RegDFault CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000490 ; SOURCE TYPE = VOLUME ;  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - - -  
- - - - -

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00



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17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00
^ *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14775
Ethanac and Barnett\14775 *** 05/22/23
*** AERMET - VERSION 16216 *** ***
*** 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

```

SOURCE ID = L0000491 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - - -
- - - - -
DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00
^ *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14775
Ethanac and Barnett\14775 *** 05/22/23
*** AERMET - VERSION 16216 *** ***
*** 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*



SOURCE ID = L0000492 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = WEEKDAY

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

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 Ethanac and Barnett\14775 \*\*\* 05/22/23  
 \*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
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\*\*\* MODELOPTs: RegDFault CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
 OF WEEK (HRDOW) \*

SOURCE ID = L0000493 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = WEEKDAY

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY



1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	
6	.0000E+00	7	.0000E+00	8	.0000E+00					
	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00					
	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00					

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	
6	.0000E+00	7	.0000E+00	8	.0000E+00					
	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00					
	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00					

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 \*\*\* AERMET - VERSION 16216 \*\*\*      \*\*\*  
    \*\*\*      13:11:59

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\*\*\* MODELOPTs:      RegDEFAULT    CONC    ELEV    URBAN    ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000494      ; SOURCE TYPE = VOLUME      :  
 HOUR    SCALAR    HOUR    SCALAR    HOUR    SCALAR    HOUR    SCALAR    HOUR    SCALAR  
 HOUR    SCALAR    HOUR    SCALAR    HOUR    SCALAR

-----

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	
6	.0000E+00	7	.0000E+00	8	.0000E+00					
	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01					
	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00					

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	
6	.0000E+00	7	.0000E+00	8	.0000E+00					
	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00					
	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00					

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	
6	.0000E+00	7	.0000E+00	8	.0000E+00					
	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00					
	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00					



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\*\*\* 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000495 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR  
- - - - -  
- - - - -  
DAY OF WEEK = WEEKDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00  
DAY OF WEEK = SATURDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00  
DAY OF WEEK = SUNDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

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Ethanac and Barnett\14775 \*\*\* 05/22/23  
\*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
\*\*\* 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000496 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR



HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

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Ethanac and Barnett\14775 \*\*\* 05/22/23  
\*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
\*\*\* 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000497 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00



9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

\*\*\* AERMOD - VERSION 22112 \*\*\*      \*\*\* C:\Users\Michael Tirohn\Desktop\HRAs\14775  
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 \*\*\* AERMET - VERSION 16216 \*\*\*      \*\*\*  
    \*\*\*      13:11:59

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\*\*\* MODELOPTs:      RegDFault    CONC    ELEV    URBAN    ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = L0000498      ; SOURCE TYPE = VOLUME      :  
 HOUR    SCALAR    HOUR    SCALAR    HOUR    SCALAR    HOUR    SCALAR    HOUR    SCALAR  
 HOUR    SCALAR    HOUR    SCALAR    HOUR    SCALAR

- - - - -  
 - - - - -

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

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\*\*\* AERMET - VERSION 16216 \*\*\*  
\*\*\* 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000499 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

\*\*\* AERMOD - VERSION 22112 \*\*\* C:\Users\Michael Tirohn\Desktop\HRAs\14775  
Ethanac and Barnett\14775 \*\*\* 05/22/23  
\*\*\* AERMET - VERSION 16216 \*\*\*  
\*\*\* 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000500 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR



```

- - - - -
DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

```

```

DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

```

```

DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

```

```

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*** AERMET - VERSION 16216 *** ***
*** 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

```

SOURCE ID = L0000501 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

```

```

- - - - -
DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

```

```

DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00

```



17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

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13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000502 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - - -  
- - - - -

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000503 ; SOURCE TYPE = VOLUME :  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR

-----  
 -----

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000504 ; SOURCE TYPE = VOLUME :  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR

-----  
 -----

DAY OF WEEK = WEEKDAY



1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

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\*\*\* MODELOPTs:    RegDFAULT   CONC   ELEV   URBAN   ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = L0000505      ; SOURCE TYPE = VOLUME      ;  
 HOUR    SCALAR    HOUR    SCALAR    HOUR    SCALAR    HOUR    SCALAR    HOUR    SCALAR  
 HOUR    SCALAR    HOUR    SCALAR    HOUR    SCALAR

-----

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				



DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

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\*\*\* MODELOPTs:      RegDFAULT    CONC    ELEV    URBAN    ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000506      ; SOURCE TYPE = VOLUME      :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

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 Ethanac and Barnett\14775 \*\*\*      05/22/23  
 \*\*\* AERMET - VERSION 16216 \*\*\*      \*\*\*  
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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000507 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR

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DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

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\*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
\*\*\* 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000508 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR

-----  
-----

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				



9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

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 Ethanac and Barnett\14775 \*\*\*      05/22/23  
 \*\*\* AERMET - VERSION 16216 \*\*\*      \*\*\*  
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\*\*\* MODELOPTs:      RegDFault   CONC   ELEV   URBAN   ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
 OF WEEK (HRDOW) \*

SOURCE ID = L0000509      ; SOURCE TYPE = VOLUME      :  
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR  
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR

- - - - -  
 - - - - -

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
---	-----------	---	-----------	---	-----------	---	-----------	---	-----------



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6  .0000E+00  7  .0000E+00  8  .0000E+00
   9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00
14  .0000E+00 15  .0000E+00 16  .0000E+00
   17  .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00
22  .0000E+00 23  .0000E+00 24  .0000E+00
^ *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14775
Ethanac and Barnett\14775 *** 05/22/23
*** AERMET - VERSION 16216 *** ***
*** 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

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SOURCE ID = L0000510 ; SOURCE TYPE = VOLUME :
  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR
HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR
-----
                                     DAY OF WEEK = WEEKDAY
   1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00
6  .0000E+00  7  .0000E+00  8  .0000E+00
   9  .1000E+01 10  .1000E+01 11  .1000E+01 12  .1000E+01 13  .1000E+01
14  .1000E+01 15  .1000E+01 16  .1000E+01
   17  .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00
22  .0000E+00 23  .0000E+00 24  .0000E+00
                                     DAY OF WEEK = SATURDAY
   1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00
6  .0000E+00  7  .0000E+00  8  .0000E+00
   9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00
14  .0000E+00 15  .0000E+00 16  .0000E+00
   17  .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00
22  .0000E+00 23  .0000E+00 24  .0000E+00
                                     DAY OF WEEK = SUNDAY
   1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00
6  .0000E+00  7  .0000E+00  8  .0000E+00
   9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00
14  .0000E+00 15  .0000E+00 16  .0000E+00
   17  .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00
22  .0000E+00 23  .0000E+00 24  .0000E+00
^ *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14775
Ethanac and Barnett\14775 *** 05/22/23
*** AERMET - VERSION 16216 *** ***
*** 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*



\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000511 ; SOURCE TYPE = VOLUME :  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY  
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
 14 .1000E+01 15 .1000E+01 16 .1000E+01  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY  
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
 14 .0000E+00 15 .0000E+00 16 .0000E+00  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY  
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
 14 .0000E+00 15 .0000E+00 16 .0000E+00  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00

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 Ethanac and Barnett\14775 \*\*\* 05/22/23  
 \*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
 \*\*\* 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000512 ; SOURCE TYPE = VOLUME :  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY  
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
 14 .1000E+01 15 .1000E+01 16 .1000E+01



17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

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Ethanac and Barnett\14775 \*\*\* 05/22/23

\*\*\* AERMET - VERSION 16216 \*\*\*  
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\*\*\* MODELOPTs: RegDFault CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000513 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - - -  
- - - - -

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00



14 .0000E+00 15 .0000E+00 16 .0000E+00  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00  
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 Ethanac and Barnett\14775 \*\*\* 05/22/23  
 \*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
 OF WEEK (HRDOW) \*

SOURCE ID = L0000514 ; SOURCE TYPE = VOLUME :  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR  
 - - - - -  
 - - - - -  
 DAY OF WEEK = WEEKDAY  
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
 14 .1000E+01 15 .1000E+01 16 .1000E+01  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00  
 DAY OF WEEK = SATURDAY  
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
 14 .0000E+00 15 .0000E+00 16 .0000E+00  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00  
 DAY OF WEEK = SUNDAY  
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
 14 .0000E+00 15 .0000E+00 16 .0000E+00  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00

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 \*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
 OF WEEK (HRDOW) \*



SOURCE ID = L0000515 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = WEEKDAY

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

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 Ethanac and Barnett\14775 \*\*\* 05/22/23  
 \*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
 \*\*\* 13:11:59

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\*\*\* MODELOPTs: RegDFault CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = L0000516 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = WEEKDAY



```

                                DAY OF WEEK = SATURDAY
      1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00
6  .0000E+00    7 .0000E+00    8 .0000E+00
      9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
      17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                DAY OF WEEK = SUNDAY
      1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00
6  .0000E+00    7 .0000E+00    8 .0000E+00
      9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
      17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
▲ *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14775
Ethanac and Barnett\14775 *** 05/22/23
*** AERMET - VERSION 16216 *** ***
***                                     13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

```

SOURCE ID = L0000517 ; SOURCE TYPE = VOLUME :
  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR
HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR
- - - - -
                                DAY OF WEEK = WEEKDAY
      1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00
6  .0000E+00    7 .0000E+00    8 .0000E+00
      9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
      17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                DAY OF WEEK = SATURDAY
      1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00
6  .0000E+00    7 .0000E+00    8 .0000E+00
      9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
      17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                DAY OF WEEK = SUNDAY
      1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00
6  .0000E+00    7 .0000E+00    8 .0000E+00
      9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
      17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00

```



22 .0000E+00 23 .0000E+00 24 .0000E+00  
 \*\*\* AERMOD - VERSION 22112 \*\*\* \*\*\* C:\Users\Michael Tirohn\Desktop\HRAs\14775  
 Ethanac and Barnett\14775 \*\*\* 05/22/23  
 \*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
 \*\*\* 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
 OF WEEK (HRDOW) \*

SOURCE ID = L0000518 ; SOURCE TYPE = VOLUME :  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR  
 - - - - -  
 - - - - -  
 DAY OF WEEK = WEEKDAY  
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
 14 .1000E+01 15 .1000E+01 16 .1000E+01  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00  
 DAY OF WEEK = SATURDAY  
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
 14 .0000E+00 15 .0000E+00 16 .0000E+00  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00  
 DAY OF WEEK = SUNDAY  
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
 14 .0000E+00 15 .0000E+00 16 .0000E+00  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00  
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 Ethanac and Barnett\14775 \*\*\* 05/22/23  
 \*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
 \*\*\* 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
 OF WEEK (HRDOW) \*

SOURCE ID = L0000519 ; SOURCE TYPE = VOLUME :



HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

-----

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

\*\*\* AERMOD - VERSION 22112 \*\*\*  
 Ethanac and Barnett\14775 \*\*\*  
 \*\*\* AERMET - VERSION 16216 \*\*\*  
 \*\*\* C:\Users\Michael Tirohn\Desktop\HRAs\14775  
 05/22/23  
 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = L0000520 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

-----

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
---	-----------	---	-----------	---	-----------	---	-----------	---	-----------







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\*\*\* MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = VOL2 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR  
-----  
-----  
DAY OF WEEK = WEEKDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00  
DAY OF WEEK = SATURDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00  
DAY OF WEEK = SUNDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

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\*\*\* MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = VOL3 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR



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- - - - -
- - - - -
DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

```

```

DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

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```

DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

```

SOURCE ID = VOL4 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

```

```

- - - - -
- - - - -
DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

```

```

DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00

```



14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = VOL5 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - - -  
- - - - -

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

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\*\*\* MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = VOL6 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

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\*\*\* MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = VOL7 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR



DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
 OF WEEK (HRDOW) \*

SOURCE ID = VOL8 ; SOURCE TYPE = VOLUME :  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00



22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = VOL9 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR

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-----

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = VOL10 ; SOURCE TYPE = VOLUME :  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR

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 -----

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

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 Ethanac and Barnett\14775 \*\*\* 05/22/23  
 \*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
 \*\*\* 13:11:59

\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = VOL11 ; SOURCE TYPE = VOLUME :  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR

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DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
---	-----------	---	-----------	---	-----------	---	-----------	---	-----------



DAY OF WEEK = SATURDAY

DAY OF WEEK = SUNDAY

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Ethanac and Barnett\14775 ***          05/22/23
*** AERMET - VERSION 16216 ***      ***
***                                  ***
***                                  ***      13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ U\*

SOURCE	ID = VOL12		; SOURCE TYPE = VOLUME	:							
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR						

DAY OF WEEK = SATURDAY

DAY OF WEEK = SUNDAY



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1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14775
Ethanac and Barnett\14775 *** 05/22/23
*** AERMET - VERSION 16216 *** ***
*** 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

```

SOURCE ID = VOL13 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR
-----
DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14775
Ethanac and Barnett\14775 *** 05/22/23
*** AERMET - VERSION 16216 *** ***
*** 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*



\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = VOL14 ; SOURCE TYPE = VOLUME :  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY  
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
 14 .1000E+01 15 .1000E+01 16 .1000E+01  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY  
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
 14 .0000E+00 15 .0000E+00 16 .0000E+00  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY  
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
 14 .0000E+00 15 .0000E+00 16 .0000E+00  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00

\*\*\* AERMOD - VERSION 22112 \*\*\* \*\*\* C:\Users\Michael Tirohn\Desktop\HRAs\14775  
 Ethanac and Barnett\14775 \*\*\* 05/22/23  
 \*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
 \*\*\* 13:11:59

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\*\*\* MODELOPTs: RegDFault CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = VOL15 ; SOURCE TYPE = VOLUME :  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY  
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01



14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

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Ethanac and Barnett\14775 \*\*\* 05/22/23  
\*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
\*\*\* 13:11:59

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\*\*\* MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = VOL16 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - - -  
- - - - -

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00



```

    9 .0000E+00  10 .0000E+00  11 .0000E+00  12 .0000E+00  13 .0000E+00
14 .0000E+00  15 .0000E+00  16 .0000E+00
    17 .0000E+00  18 .0000E+00  19 .0000E+00  20 .0000E+00  21 .0000E+00
22 .0000E+00  23 .0000E+00  24 .0000E+00
^ *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14775
Ethanac and Barnett\14775 *** 05/22/23
*** AERMET - VERSION 16216 *** ***
***                                     13:11:59

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\*\*\* MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

```

SOURCE ID = VOL17 ; SOURCE TYPE = VOLUME :
  HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - - -
DAY OF WEEK = WEEKDAY
    1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00
6 .0000E+00  7 .0000E+00  8 .0000E+00
    9 .1000E+01  10 .1000E+01  11 .1000E+01  12 .1000E+01  13 .1000E+01
14 .1000E+01  15 .1000E+01  16 .1000E+01
    17 .0000E+00  18 .0000E+00  19 .0000E+00  20 .0000E+00  21 .0000E+00
22 .0000E+00  23 .0000E+00  24 .0000E+00
DAY OF WEEK = SATURDAY
    1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00
6 .0000E+00  7 .0000E+00  8 .0000E+00
    9 .0000E+00  10 .0000E+00  11 .0000E+00  12 .0000E+00  13 .0000E+00
14 .0000E+00  15 .0000E+00  16 .0000E+00
    17 .0000E+00  18 .0000E+00  19 .0000E+00  20 .0000E+00  21 .0000E+00
22 .0000E+00  23 .0000E+00  24 .0000E+00
DAY OF WEEK = SUNDAY
    1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00
6 .0000E+00  7 .0000E+00  8 .0000E+00
    9 .0000E+00  10 .0000E+00  11 .0000E+00  12 .0000E+00  13 .0000E+00
14 .0000E+00  15 .0000E+00  16 .0000E+00
    17 .0000E+00  18 .0000E+00  19 .0000E+00  20 .0000E+00  21 .0000E+00
22 .0000E+00  23 .0000E+00  24 .0000E+00
^ *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14775
Ethanac and Barnett\14775 *** 05/22/23
*** AERMET - VERSION 16216 *** ***
***                                     13:11:59

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\*\*\* MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY



OF WEEK (HRDOW) \*

SOURCE ID = VOL18 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR

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DAY OF WEEK = WEEKDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

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Ethanac and Barnett\14775 \*\*\* 05/22/23  
\*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
\*\*\* 13:11:59

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\*\*\* MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = VOL19 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR

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DAY OF WEEK = WEEKDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00



22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

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Ethanac and Barnett\14775 \*\*\* 05/22/23

\*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
\*\*\* 13:11:59

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\*\*\* MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = VOL20 ; SOURCE TYPE = VOLUME ;  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - - -  
- - - - -

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00



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17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14775
Ethanac and Barnett\14775 *** 05/22/23
*** AERMET - VERSION 16216 *** ***
*** 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

```

SOURCE ID = L0000351 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - - -
DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14775
Ethanac and Barnett\14775 *** 05/22/23
*** AERMET - VERSION 16216 *** ***
*** 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*







1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

\*\*\* AERMOD - VERSION 22112 \*\*\*      \*\*\* C:\Users\Michael Tirohn\Desktop\HRAs\14775  
 Ethanac and Barnett\14775 \*\*\*      05/22/23  
 \*\*\* AERMET - VERSION 16216 \*\*\*      \*\*\*  
                                  \*\*\*      13:11:59

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\*\*\* MODELOPTs:      RegDFault    CONC    ELEV    URBAN    ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = L0000354      ; SOURCE TYPE = VOLUME      :  
 HOUR    SCALAR    HOUR    SCALAR    HOUR    SCALAR    HOUR    SCALAR    HOUR    SCALAR  
 HOUR    SCALAR    HOUR    SCALAR    HOUR    SCALAR

-----

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				



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Ethanac and Barnett\14775 \*\*\* 05/22/23  
\*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
\*\*\* 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000355 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR  
- - - - -  
- - - - -  
DAY OF WEEK = WEEKDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00  
DAY OF WEEK = SATURDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00  
DAY OF WEEK = SUNDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

▲ \*\*\* AERMOD - VERSION 22112 \*\*\* \*\*\* C:\Users\Michael Tirohn\Desktop\HRAs\14775  
Ethanac and Barnett\14775 \*\*\* 05/22/23  
\*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
\*\*\* 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000356 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR



HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

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\*\*\* 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000357 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00



9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

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 \*\*\* AERMET - VERSION 16216 \*\*\*      \*\*\*  
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\*\*\* MODELOPTs:      RegDFault    CONC    ELEV    URBAN    ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000358      ; SOURCE TYPE = VOLUME      :  
 HOUR    SCALAR    HOUR    SCALAR    HOUR    SCALAR    HOUR    SCALAR    HOUR    SCALAR  
 HOUR    SCALAR    HOUR    SCALAR    HOUR    SCALAR

- - - - -  
 - - - - -

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000359 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000360 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR



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- - - - -
DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

```

```

DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

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DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

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SOURCE ID = L0000361 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

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```

- - - - -
DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

```

```

DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00

```



17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

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\*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000362 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - - -  
- - - - -

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

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\*\*\* 13:11:59



\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = L0000363 ; SOURCE TYPE = VOLUME :  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR

-----

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = L0000364 ; SOURCE TYPE = VOLUME :  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR

-----

DAY OF WEEK = WEEKDAY



1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

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\*\*\* MODELOPTs:    RegDFAULT   CONC   ELEV   URBAN   ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = L0000365       ; SOURCE TYPE = VOLUME       ;  
 HOUR    SCALAR    HOUR    SCALAR    HOUR    SCALAR    HOUR    SCALAR    HOUR    SCALAR  
 HOUR    SCALAR    HOUR    SCALAR    HOUR    SCALAR

-----

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				



DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

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 Ethanac and Barnett\14775  
 \*\*\* AERMET - VERSION 16216 \*\*\*  
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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = L0000366 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

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 Ethanac and Barnett\14775  
 \*\*\* AERMET - VERSION 16216 \*\*\*  
 05/22/23  
 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000367 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - - -  
- - - - -

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

▲ \*\*\* AERMOD - VERSION 22112 \*\*\* \*\*\* C:\Users\Michael Tirohn\Desktop\HRAs\14775  
Ethanac and Barnett\14775 \*\*\* 05/22/23  
\*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
\*\*\* 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000368 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - - -  
- - - - -

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				



9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

▲ \*\*\* AERMOD - VERSION 22112 \*\*\*      \*\*\* C:\Users\Michael Tirohn\Desktop\HRAs\14775  
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 \*\*\* AERMET - VERSION 16216 \*\*\*      \*\*\*  
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\*\*\* MODELOPTs:      RegDFault   CONC   ELEV   URBAN   ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
 OF WEEK (HRDOW) \*

SOURCE ID = L000369      ; SOURCE TYPE = VOLUME      :									
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				
- - - - -									
- - - - -									

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
---	-----------	---	-----------	---	-----------	---	-----------	---	-----------



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6  .0000E+00  7  .0000E+00  8  .0000E+00
   9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00
14  .0000E+00 15  .0000E+00 16  .0000E+00
   17  .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00
22  .0000E+00 23  .0000E+00 24  .0000E+00
^ *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14775
Ethanac and Barnett\14775 *** 05/22/23
*** AERMET - VERSION 16216 *** ***
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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

```

SOURCE ID = L0000370 ; SOURCE TYPE = VOLUME :
  HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
  HOUR SCALAR HOUR SCALAR HOUR SCALAR
  - - - - -
  - - - - -
                                DAY OF WEEK = WEEKDAY
      1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00
6  .0000E+00  7  .0000E+00  8  .0000E+00
   9  .1000E+01 10  .1000E+01 11  .1000E+01 12  .1000E+01 13  .1000E+01
14  .1000E+01 15  .1000E+01 16  .1000E+01
   17  .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00
22  .0000E+00 23  .0000E+00 24  .0000E+00
                                DAY OF WEEK = SATURDAY
      1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00
6  .0000E+00  7  .0000E+00  8  .0000E+00
   9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00
14  .0000E+00 15  .0000E+00 16  .0000E+00
   17  .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00
22  .0000E+00 23  .0000E+00 24  .0000E+00
                                DAY OF WEEK = SUNDAY
      1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00
6  .0000E+00  7  .0000E+00  8  .0000E+00
   9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00
14  .0000E+00 15  .0000E+00 16  .0000E+00
   17  .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00
22  .0000E+00 23  .0000E+00 24  .0000E+00
^ *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14775
Ethanac and Barnett\14775 *** 05/22/23
*** AERMET - VERSION 16216 *** ***
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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*



\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

```

SOURCE ID = L0000371      ; SOURCE TYPE = VOLUME      :
  HOUR   SCALAR  HOUR   SCALAR  HOUR   SCALAR  HOUR   SCALAR  HOUR   SCALAR
HOUR   SCALAR  HOUR   SCALAR  HOUR   SCALAR
- - - - -
- - - - - DAY OF WEEK = WEEKDAY
    1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00
6 .0000E+00    7 .0000E+00    8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
    17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
- - - - - DAY OF WEEK = SATURDAY
    1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00
6 .0000E+00    7 .0000E+00    8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
    17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
- - - - - DAY OF WEEK = SUNDAY
    1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00
6 .0000E+00    7 .0000E+00    8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
    17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
^ *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14775
Ethanac and Barnett\14775 *** 05/22/23
*** AERMET - VERSION 16216 *** ***
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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

```

SOURCE ID = L0000372      ; SOURCE TYPE = VOLUME      :
  HOUR   SCALAR  HOUR   SCALAR  HOUR   SCALAR  HOUR   SCALAR  HOUR   SCALAR
HOUR   SCALAR  HOUR   SCALAR  HOUR   SCALAR
- - - - -
- - - - - DAY OF WEEK = WEEKDAY
    1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00
6 .0000E+00    7 .0000E+00    8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01

```



17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

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Ethanac and Barnett\14775 \*\*\* 05/22/23

\*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
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\*\*\* MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L000373 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - - -  
- - - - -

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00



14 .0000E+00 15 .0000E+00 16 .0000E+00  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00  
 \*\*\* AERMOD - VERSION 22112 \*\*\* \*\*\* C:\Users\Michael Tirohn\Desktop\HRAs\14775  
 Ethanac and Barnett\14775 \*\*\* 05/22/23  
 \*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
 \*\*\* 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
 OF WEEK (HRDOW) \*

SOURCE ID = L000374 ; SOURCE TYPE = VOLUME :  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR  
 - - - - -  
 - - - - -  
 DAY OF WEEK = WEEKDAY  
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
 14 .1000E+01 15 .1000E+01 16 .1000E+01  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00  
 DAY OF WEEK = SATURDAY  
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
 14 .0000E+00 15 .0000E+00 16 .0000E+00  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00  
 DAY OF WEEK = SUNDAY  
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
 14 .0000E+00 15 .0000E+00 16 .0000E+00  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00  
 \*\*\* AERMOD - VERSION 22112 \*\*\* \*\*\* C:\Users\Michael Tirohn\Desktop\HRAs\14775  
 Ethanac and Barnett\14775 \*\*\* 05/22/23  
 \*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
 \*\*\* 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
 OF WEEK (HRDOW) \*



SOURCE ID = L0000375 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = WEEKDAY

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

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 Ethanac and Barnett\14775 \*\*\* 05/22/23  
 \*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
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\*\*\* MODELOPTs: RegDFault CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = L0000376 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = WEEKDAY



```

                                DAY OF WEEK = SATURDAY
      1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00
6  .0000E+00    7 .0000E+00    8 .0000E+00
      9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
      17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                DAY OF WEEK = SUNDAY
      1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00
6  .0000E+00    7 .0000E+00    8 .0000E+00
      9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
      17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
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Ethanac and Barnett\14775 *** 05/22/23
*** AERMET - VERSION 16216 *** ***
                                ***
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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

```

SOURCE ID = L0000377 ; SOURCE TYPE = VOLUME :
  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR
HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR
- - - - -
                                DAY OF WEEK = WEEKDAY
      1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00
6  .0000E+00    7 .0000E+00    8 .0000E+00
      9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
      17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                DAY OF WEEK = SATURDAY
      1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00
6  .0000E+00    7 .0000E+00    8 .0000E+00
      9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
      17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                DAY OF WEEK = SUNDAY
      1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00
6  .0000E+00    7 .0000E+00    8 .0000E+00
      9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
      17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00

```



22 .0000E+00 23 .0000E+00 24 .0000E+00  
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 Ethanac and Barnett\14775 \*\*\* 05/22/23  
 \*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
 OF WEEK (HRDOW) \*

SOURCE ID = L0000378 ; SOURCE TYPE = VOLUME :  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR  
 - - - - -  
 - - - - -  
 DAY OF WEEK = WEEKDAY  
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
 14 .1000E+01 15 .1000E+01 16 .1000E+01  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00  
 DAY OF WEEK = SATURDAY  
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
 14 .0000E+00 15 .0000E+00 16 .0000E+00  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00  
 DAY OF WEEK = SUNDAY  
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
 14 .0000E+00 15 .0000E+00 16 .0000E+00  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00  
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 \*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
 OF WEEK (HRDOW) \*

SOURCE ID = L0000379 ; SOURCE TYPE = VOLUME :



HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = L000380 ; SOURCE TYPE = VOLUME :  

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
---	-----------	---	-----------	---	-----------	---	-----------	---	-----------



		DAY OF WEEK = SUNDAY				
	1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	
6	.0000E+00	7 .0000E+00	8 .0000E+00			
	9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	
14	.0000E+00	15 .0000E+00	16 .0000E+00			
	17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	
22	.0000E+00	23 .0000E+00	24 .0000E+00			

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\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

		DAY OF WEEK = WEEKDAY				
	1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	
6	.0000E+00	7 .0000E+00	8 .0000E+00			
	9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	
14	.1000E+01	15 .1000E+01	16 .1000E+01			
	17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	
22	.0000E+00	23 .0000E+00	24 .0000E+00			

DAY OF WEEK = SATURDAY					
1	.0000E+00	2	.0000E+00	3	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY					
1	.0000E+00	2	.0000E+00	3	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00
	9	.0000E+00	10	.0000E+00	11
14	.0000E+00	15	.0000E+00	16	.0000E+00
	17	.0000E+00	18	.0000E+00	19
22	.0000E+00	23	.0000E+00	24	.0000E+00

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\*\*\* MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000382 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR  
-----  
-----  
DAY OF WEEK = WEEKDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00  
DAY OF WEEK = SATURDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00  
DAY OF WEEK = SUNDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

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\*\*\* MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000383 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR



```

- - - - -
- - - - -
DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

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```

DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

```

```

DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

```

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*** AERMET - VERSION 16216 *** ***
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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

```

SOURCE ID = L0000384 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

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```

- - - - -
- - - - -
DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

```

```

DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00

```



14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000385 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - - -  
- - - - -

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000386 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
22 .0000E+00 23 .0000E+00 24 .0000E+00

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000387 ; SOURCE TYPE = VOLUME :  
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
HOUR SCALAR HOUR SCALAR HOUR SCALAR



DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

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 Ethanac and Barnett\14775 \*\*\* 05/22/23  
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 \*\*\* 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
 OF WEEK (HRDOW) \*

SOURCE ID = L0000388 ; SOURCE TYPE = VOLUME :  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00



22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00

6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00

14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00

22 .0000E+00 23 .0000E+00 24 .0000E+00

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Ethanac and Barnett\14775 \*\*\* 05/22/23

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000389 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
------	--------	------	--------	------	--------	------	--------	------	--------

-----

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00

6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01

14 .1000E+01 15 .1000E+01 16 .1000E+01

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00

22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00

6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00

14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00

22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00

6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00

14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00

22 .0000E+00 23 .0000E+00 24 .0000E+00

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Ethanac and Barnett\14775 \*\*\* 05/22/23

\*\*\* AERMET - VERSION 16216 \*\*\*

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = L0000390 ; SOURCE TYPE = VOLUME :  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - - -  
 - - - - -

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = L0000391 ; SOURCE TYPE = VOLUME :  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - - -  
 - - - - -

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
---	-----------	---	-----------	---	-----------	---	-----------	---	-----------



DAY OF WEEK = SATURDAY

DAY OF WEEK = SUNDAY

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Ethanac and Barnett\14775 ***      05/22/23
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***                                  ***
***                                  13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ U\*

SOURCE ID = L0000392 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

DAY OF WEEK = SATURDAY

DAY OF WEEK = SUNDAY



1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	
6	.0000E+00	7	.0000E+00	8	.0000E+00					
	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00					
	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00					

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\*\*\* MODELOPTs:    RegDFault    CONC    ELEV    URBAN    ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000393      ; SOURCE TYPE = VOLUME      :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	
6	.0000E+00	7	.0000E+00	8	.0000E+00					
	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.1000E+01					
	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00					

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	
6	.0000E+00	7	.0000E+00	8	.0000E+00					
	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00					
	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00					

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	
6	.0000E+00	7	.0000E+00	8	.0000E+00					
	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00					
	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00					

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	
6	.0000E+00	7	.0000E+00	8	.0000E+00					
	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00					
	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00					

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\*\*\* MODELOPTs:    RegDFault    CONC    ELEV    URBAN    ADJ\_U\*



\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000394 ; SOURCE TYPE = VOLUME :  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY  
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
 14 .1000E+01 15 .1000E+01 16 .1000E+01  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY  
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
 14 .0000E+00 15 .0000E+00 16 .0000E+00  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY  
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
 14 .0000E+00 15 .0000E+00 16 .0000E+00  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00

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\*\*\* MODELOPTs: RegDFault CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW) \*

SOURCE ID = L0000395 ; SOURCE TYPE = VOLUME :  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY  
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01



14 .1000E+01 15 .1000E+01 16 .1000E+01  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
 14 .0000E+00 15 .0000E+00 16 .0000E+00  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
 14 .0000E+00 15 .0000E+00 16 .0000E+00  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00

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 Ethanac and Barnett\14775 \*\*\* 05/22/23  
 \*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
 \*\*\* 13:11:59

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\*\*\* MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
 OF WEEK (HRDOW) \*

SOURCE ID = L0000396 ; SOURCE TYPE = VOLUME :  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - - -  
 - - - - -

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01  
 14 .1000E+01 15 .1000E+01 16 .1000E+01  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
 14 .0000E+00 15 .0000E+00 16 .0000E+00  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00



```

    9 .0000E+00  10 .0000E+00  11 .0000E+00  12 .0000E+00  13 .0000E+00
14 .0000E+00  15 .0000E+00  16 .0000E+00
    17 .0000E+00  18 .0000E+00  19 .0000E+00  20 .0000E+00  21 .0000E+00
22 .0000E+00  23 .0000E+00  24 .0000E+00
^ *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14775
Ethanac and Barnett\14775 *** 05/22/23
*** AERMET - VERSION 16216 *** ***
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\*\*\* MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ\_U\*

\*\*\* DISCRETE CARTESIAN RECEPTORS \*\*\*  
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)  
(METERS)

```

( 481674.7, 3733528.2, 432.6, 432.6, 0.0); ( 481678.5,
3733485.2, 433.0, 433.0, 0.0);
( 482332.4, 3733529.2, 434.0, 434.0, 0.0); ( 482072.7,
3733713.3, 433.0, 433.0, 0.0);
( 482216.7, 3733719.2, 433.0, 433.0, 0.0); ( 481358.9,
3733604.3, 432.0, 432.0, 0.0);
( 481263.4, 3733447.0, 432.0, 432.0, 0.0); ( 481263.1,
3733556.7, 431.8, 431.8, 0.0);
( 481632.2, 3732857.9, 433.0, 433.0, 0.0); ( 482685.2,
3732853.1, 435.0, 435.0, 0.0);
( 482130.0, 3732676.5, 435.0, 435.0, 0.0); ( 482403.3,
3732672.4, 435.8, 435.8, 0.0);
( 481674.8, 3732799.4, 433.0, 433.0, 0.0); ( 482838.5,
3733632.3, 435.0, 435.0, 0.0);
( 483293.6, 3733685.7, 436.0, 436.0, 0.0); ( 483197.2,
3731112.9, 441.2, 651.0, 0.0);
( 483154.3, 3731089.9, 441.0, 651.0, 0.0); ( 484158.5,
3733886.5, 441.5, 441.5, 0.0);
( 484127.2, 3733944.4, 441.2, 441.2, 0.0); ( 480863.5,
3734010.1, 430.0, 430.0, 0.0);
( 481969.2, 3732847.3, 434.0, 434.0, 0.0); ( 481994.9,
3733761.9, 433.0, 433.0, 0.0);
( 481484.8, 3733176.0, 433.0, 433.0, 0.0); ( 481572.2,
3733752.1, 432.0, 432.0, 0.0);
( 481862.6, 3733698.6, 433.0, 433.0, 0.0);

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*** AERMET - VERSION 16216 *** ***
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13:11:59

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\*\*\* MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ\_U\*



\*\*\* METEOROLOGICAL DAYS SELECTED FOR

(1=YES; 0=NO)

[illegible]

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

CATEGORIES \*\*\*

\*\*\* UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED

(METERS/SEC)

10.80,

1.54, 3.09, 5.14, 8.23,

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05/22/23

\*\*\* AERMET - VERSION 16216 \*\*\*

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\*\*\* MODELOPTs: RegDFault CONC ELEV URBAN ADJ U\*

\*\*\* UP TO THE FIRST 24 HOURS OF METEOROLOGICAL

DATA \*\*\*

Surface file: PERI V9 ADJU\PERI v9.SFC

Met Version: 16216

Profile file: PERI V9 ADJU\PERI v9.PFL

Surface format: FREE

Profile format: FREE



Surface station no.: 3171

Name: UNKNOWN

Year: 2010

Upper air station no.: 3190

Name: UNKNOWN

Year: 2010

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	Z0	BOWEN
ALBEDO	REF	WS	WD	HT	REF	TA	HT							
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	01	01	1	01	-7.9	0.125	-9.000	-9.000	-999.	106.	21.2	0.19	0.61	
1.00	1.30	335.			9.1	282.5	5.5							
10	01	01	1	02	-3.9	0.088	-9.000	-9.000	-999.	62.	15.1	0.19	0.61	
1.00	0.90	142.			9.1	280.9	5.5							
10	01	01	1	03	-3.9	0.088	-9.000	-9.000	-999.	62.	15.1	0.19	0.61	
1.00	0.90	324.			9.1	280.4	5.5							
10	01	01	1	04	-1.3	0.064	-9.000	-9.000	-999.	39.	18.3	0.19	0.61	
1.00	0.40	294.			9.1	278.8	5.5							
10	01	01	1	05	-3.9	0.088	-9.000	-9.000	-999.	62.	15.0	0.19	0.61	
1.00	0.90	205.			9.1	278.1	5.5							
10	01	01	1	06	-1.3	0.065	-9.000	-9.000	-999.	39.	18.3	0.19	0.61	
1.00	0.40	3.			9.1	277.0	5.5							
10	01	01	1	07	-8.0	0.125	-9.000	-9.000	-999.	106.	21.0	0.19	0.61	
1.00	1.30	99.			9.1	277.0	5.5							
10	01	01	1	08	-3.3	0.086	-9.000	-9.000	-999.	61.	16.8	0.19	0.61	
0.54	0.90	319.			9.1	278.8	5.5							
10	01	01	1	09	20.1	0.128	0.307	0.010	49.	110.	-9.0	0.19	0.61	
0.33	0.90	239.			9.1	284.2	5.5							
10	01	01	1	10	56.7	0.087	0.560	0.010	107.	62.	-1.0	0.19	0.61	
0.26	0.40	188.			9.1	289.2	5.5							
10	01	01	1	11	81.5	0.323	0.867	0.008	277.	441.	-35.9	0.19	0.61	
0.23	2.70	310.			9.1	290.9	5.5							
10	01	01	1	12	97.1	0.281	1.058	0.008	421.	357.	-19.7	0.19	0.61	
0.22	2.20	357.			9.1	293.1	5.5							
10	01	01	1	13	92.2	0.279	1.117	0.008	523.	354.	-20.4	0.19	0.61	
0.22	2.20	356.			9.1	293.8	5.5							
10	01	01	1	14	77.6	0.275	1.102	0.008	595.	347.	-23.2	0.19	0.61	
0.23	2.20	50.			9.1	294.2	5.5							
10	01	01	1	15	54.9	0.230	1.006	0.008	640.	266.	-19.2	0.19	0.61	
0.27	1.80	53.			9.1	293.8	5.5							
10	01	01	1	16	12.3	0.206	0.613	0.008	648.	225.	-61.5	0.19	0.61	
0.36	1.80	11.			9.1	292.5	5.5							
10	01	01	1	17	-3.6	0.087	-9.000	-9.000	-999.	71.	15.6	0.19	0.61	
0.64	0.90	351.			9.1	290.4	5.5							
10	01	01	1	18	-3.8	0.087	-9.000	-9.000	-999.	62.	15.2	0.19	0.61	
1.00	0.90	186.			9.1	287.5	5.5							
10	01	01	1	19	-3.8	0.087	-9.000	-9.000	-999.	62.	15.2	0.19	0.61	
1.00	0.90	275.			9.1	285.9	5.5							
10	01	01	1	20	-1.2	0.064	-9.000	-9.000	-999.	39.	18.1	0.19	0.61	
1.00	0.40	181.			9.1	285.4	5.5							



10	01	01	1	21	-7.8	0.125	-9.000	-9.000	-999.	106.	21.3	0.19	0.61
1.00		1.30	318.		9.1	284.9	5.5						
10	01	01	1	22	-3.8	0.088	-9.000	-9.000	-999.	62.	15.1	0.19	0.61
1.00		0.90	196.		9.1	283.1	5.5						
10	01	01	1	23	-3.8	0.088	-9.000	-9.000	-999.	62.	15.1	0.19	0.61
1.00		0.90	330.		9.1	281.4	5.5						
10	01	01	1	24	-7.9	0.125	-9.000	-9.000	-999.	106.	21.2	0.19	0.61
1.00		1.30	332.		9.1	280.9	5.5						

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
10	01	01	01	5.5	0	-999.	-99.00	282.6	99.0	-99.00	-99.00
10	01	01	01	9.1	1	335.	1.30	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

^ \*\*\* AERMOD - VERSION 22112 \*\*\* \*\*\* C:\Users\Michael Tirohn\Desktop\HRAs\14775  
 Ethanac and Barnett\14775 \*\*\* 05/22/23  
 \*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
 \*\*\* 13:11:59

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\*\*\* THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5  
 YEARS FOR SOURCE GROUP: ALL \*\*\*  
 INCLUDING SOURCE(S): L0000487 , L0000488  
 , L0000489 , L0000490 , L0000491 ,  
 L0000492 , L0000493 , L0000494 , L0000495 , L0000496  
 , L0000497 , L0000498 , L0000499 ,  
 L0000500 , L0000501 , L0000502 , L0000503 , L0000504  
 , L0000505 , L0000506 , L0000507 ,  
 L0000508 , L0000509 , L0000510 , L0000511 , L0000512  
 , L0000513 , L0000514 , . . . ,

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS

\*\*\*

\*\* CONC OF DPM IN MICROGRAMS/M\*\*3

\*\*

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)
Y-COORD (M)	CONC		
481674.68	3733528.18	0.00945	481678.55
3733485.20	0.01034		
482332.42	3733529.19	0.00982	482072.67
3733713.28	0.02450		
482216.68	3733719.21	0.01758	481358.93



3733604.26	0.00228		
481263.43	3733447.05	0.00194	481263.12
3733556.71	0.00184		
481632.16	3732857.88	0.00371	482685.25
3732853.15	0.00255		
482129.97	3732676.48	0.00464	482403.26
3732672.44	0.00423		
481674.81	3732799.36	0.00344	482838.46
3733632.31	0.00145		
483293.65	3733685.67	0.00073	483197.16
3731112.95	0.00061		
483154.33	3731089.88	0.00061	484158.53
3733886.47	0.00038		
484127.24	3733944.44	0.00038	480863.49
3734010.10	0.00081		
481969.25	3732847.29	0.00696	481994.88
3733761.91	0.01798		
481484.76	3733176.04	0.00409	481572.25
3733752.15	0.00381		
481862.57	3733698.63	0.02266	

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\*\*\* MODELOPTs:      RegDFAULT    CONC    ELEV    URBAN    ADJ\_U\*

\*\*\* THE SUMMARY OF MAXIMUM ANNUAL RESULTS

AVERAGED OVER    5 YEARS \*\*\*

\*\* CONC OF DPM            IN MICROGRAMS/M\*\*3

\*\*

GROUP ID		NETWORK	AVERAGE CONC	RECEPTOR (XR, YR,
ZELEV, ZHILL, ZFLAG)		OF TYPE	GRID-ID	
-----				
-----				
ALL	1ST HIGHEST VALUE IS		0.02450 AT (	482072.67, 3733713.28,
433.00,	433.00, 0.00) DC			
	2ND HIGHEST VALUE IS		0.02266 AT (	481862.57, 3733698.63,
433.00,	433.00, 0.00) DC			
	3RD HIGHEST VALUE IS		0.01798 AT (	481994.88, 3733761.91,
433.00,	433.00, 0.00) DC			
	4TH HIGHEST VALUE IS		0.01758 AT (	482216.68, 3733719.21,



433.00,	433.00,	0.00)	DC			
	5TH HIGHEST VALUE IS			0.01034 AT (	481678.55,	3733485.20,
433.00,	433.00,	0.00)	DC			
	6TH HIGHEST VALUE IS			0.00982 AT (	482332.42,	3733529.19,
434.00,	434.00,	0.00)	DC			
	7TH HIGHEST VALUE IS			0.00945 AT (	481674.68,	3733528.18,
432.59,	432.59,	0.00)	DC			
	8TH HIGHEST VALUE IS			0.00696 AT (	481969.25,	3732847.29,
434.00,	434.00,	0.00)	DC			
	9TH HIGHEST VALUE IS			0.00464 AT (	482129.97,	3732676.48,
435.00,	435.00,	0.00)	DC			
	10TH HIGHEST VALUE IS			0.00423 AT (	482403.26,	3732672.44,
435.80,	435.80,	0.00)	DC			

\*\*\* RECEPTOR TYPES: GC = GRIDCART  
GP = GRIDPOLR  
DC = DISCCART  
DP = DISCPOLR

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\*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
\*\*\* 13:11:59

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\*\*\* MODELOPTs: RegDFault CONC ELEV URBAN ADJ\_U\*

\*\*\* Message Summary : AERMOD Model Execution \*\*\*

----- Summary of Total Messages -----

A Total of	0 Fatal Error Message(s)
A Total of	4 Warning Message(s)
A Total of	2028 Informational Message(s)
A Total of	43824 Hours Were Processed
A Total of	978 Calm Hours Identified
A Total of	1050 Missing Hours Identified ( 2.40 Percent)

\*\*\*\*\* FATAL ERROR MESSAGES \*\*\*\*\*  
\*\*\* NONE \*\*\*

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*  
ME W186 1565 MEOPEN: THRESH\_1MIN 1-min ASOS wind speed threshold used  
0.50  
ME W187 1565 MEOPEN: ADJ\_U\* Option for Stable Low Winds used in AERMET



MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at:  
14010101  
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at:  
2 year gap

\*\*\*\*\*  
\*\*\* AERMOD Finishes Successfully \*\*\*  
\*\*\*\*\*

\*\*  
\*\*\*\*\*  
\*\*  
\*\* AERMOD Input Produced by:  
\*\* AERMOD View Ver. 11.2.0  
\*\* Lakes Environmental Software Inc.  
\*\* Date: 5/22/2023  
\*\* File: C:\Lakes\AERMOD View\14775-04 HRA Modeling Files\14775 Ops\14775 Ops.ADI  
\*\*  
\*\*\*\*\*

\*\*  
\*\*  
\*\*\*\*\*  
\*\* AERMOD Control Pathway  
\*\*\*\*\*  
\*\*  
\*\*

CO STARTING  
TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\14775 Ethanac and Barnett\14775  
MODELOPT DFAULT CONC  
AVERTIME ANNUAL  
URBANOPT 2189641 Riverside\_County  
POLLUTID DPM  
RUNORNOT RUN  
ERRORFIL "14775 Ops.err"

CO FINISHED  
\*\*  
\*\*\*\*\*  
\*\* AERMOD Source Pathway  
\*\*\*\*\*  
\*\*  
\*\*

SO STARTING  
\*\* Source Location \*\*  
\*\* Source ID - Type - X Coord. - Y Coord. \*\*  
\*\* -----  
\*\* Line Source Represented by Adjacent Volume Sources  
\*\* LINE VOLUME Source ID = SLINE1  
\*\* DESCRSRC Bldg A Idle  
\*\* PREFIX



```

** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 8.958E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 481953.029, 3733438.592, 433.00, 3.49, 4.00
** 482031.383, 3733438.592, 433.00, 3.49, 4.00
** -----
LOCATION L0000220    VOLUME    481957.324 3733438.592 433.00
LOCATION L0000221    VOLUME    481965.914 3733438.592 433.00
LOCATION L0000222    VOLUME    481974.504 3733438.592 433.00
LOCATION L0000223    VOLUME    481983.094 3733438.592 433.00
LOCATION L0000224    VOLUME    481991.684 3733438.592 433.00
LOCATION L0000225    VOLUME    482000.274 3733438.592 433.00
LOCATION L0000226    VOLUME    482008.864 3733438.592 433.00
LOCATION L0000227    VOLUME    482017.454 3733438.592 433.00
LOCATION L0000228    VOLUME    482026.044 3733438.592 433.00
** End of LINE VOLUME Source ID = SLINE1
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC Bldg B Idle
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 8.958E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 481953.029, 3733311.434, 433.00, 3.49, 4.00
** 482031.002, 3733311.434, 433.00, 3.49, 4.00
** -----
LOCATION L0000229    VOLUME    481957.324 3733311.434 433.00
LOCATION L0000230    VOLUME    481965.914 3733311.434 433.00
LOCATION L0000231    VOLUME    481974.504 3733311.434 433.00
LOCATION L0000232    VOLUME    481983.094 3733311.434 433.00
LOCATION L0000233    VOLUME    481991.684 3733311.434 433.00
LOCATION L0000234    VOLUME    482000.274 3733311.434 433.00
LOCATION L0000235    VOLUME    482008.864 3733311.434 433.00
LOCATION L0000236    VOLUME    482017.454 3733311.434 433.00
LOCATION L0000237    VOLUME    482026.044 3733311.434 433.00
** End of LINE VOLUME Source ID = SLINE2
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Onsite 1
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent

```



\*\* Emission Rate = 0.00001298

\*\* Vertical Dimension = 6.99

\*\* SZINIT = 3.25

\*\* Nodes = 9

\*\* 482073.515, 3733291.798, 433.00, 3.49, 4.00

\*\* 481935.109, 3733291.226, 433.00, 3.49, 4.00

\*\* 481928.055, 3733293.132, 433.00, 3.49, 4.00

\*\* 481925.004, 3733298.470, 433.00, 3.49, 4.00

\*\* 481926.148, 3733441.070, 433.00, 3.49, 4.00

\*\* 481925.576, 3733533.532, 433.00, 3.49, 4.00

\*\* 481929.771, 3733542.492, 433.00, 3.49, 4.00

\*\* 481937.587, 3733545.733, 433.00, 3.49, 4.00

\*\* 482070.846, 3733545.924, 433.00, 3.49, 4.00

\*\*

LOCATION	L0000238	VOLUME	482069.220	3733291.780	433.00
LOCATION	L0000239	VOLUME	482060.630	3733291.744	433.00
LOCATION	L0000240	VOLUME	482052.040	3733291.709	433.00
LOCATION	L0000241	VOLUME	482043.450	3733291.673	433.00
LOCATION	L0000242	VOLUME	482034.860	3733291.638	433.00
LOCATION	L0000243	VOLUME	482026.270	3733291.602	433.00
LOCATION	L0000244	VOLUME	482017.680	3733291.567	433.00
LOCATION	L0000245	VOLUME	482009.090	3733291.531	433.00
LOCATION	L0000246	VOLUME	482000.500	3733291.496	433.00
LOCATION	L0000247	VOLUME	481991.911	3733291.460	433.00
LOCATION	L0000248	VOLUME	481983.321	3733291.425	433.00
LOCATION	L0000249	VOLUME	481974.731	3733291.389	433.00
LOCATION	L0000250	VOLUME	481966.141	3733291.354	433.00
LOCATION	L0000251	VOLUME	481957.551	3733291.318	433.00
LOCATION	L0000252	VOLUME	481948.961	3733291.283	433.00
LOCATION	L0000253	VOLUME	481940.371	3733291.247	433.00
LOCATION	L0000254	VOLUME	481931.896	3733292.094	433.00
LOCATION	L0000255	VOLUME	481925.767	3733297.135	433.00
LOCATION	L0000256	VOLUME	481925.061	3733305.522	433.00
LOCATION	L0000257	VOLUME	481925.130	3733314.112	433.00
LOCATION	L0000258	VOLUME	481925.199	3733322.702	433.00
LOCATION	L0000259	VOLUME	481925.268	3733331.292	433.00
LOCATION	L0000260	VOLUME	481925.337	3733339.881	433.00
LOCATION	L0000261	VOLUME	481925.406	3733348.471	433.00
LOCATION	L0000262	VOLUME	481925.474	3733357.061	433.00
LOCATION	L0000263	VOLUME	481925.543	3733365.651	433.00
LOCATION	L0000264	VOLUME	481925.612	3733374.240	433.00
LOCATION	L0000265	VOLUME	481925.681	3733382.830	433.00
LOCATION	L0000266	VOLUME	481925.750	3733391.420	433.00
LOCATION	L0000267	VOLUME	481925.819	3733400.009	433.00
LOCATION	L0000268	VOLUME	481925.888	3733408.599	433.00
LOCATION	L0000269	VOLUME	481925.957	3733417.189	433.00
LOCATION	L0000270	VOLUME	481926.026	3733425.779	433.00
LOCATION	L0000271	VOLUME	481926.095	3733434.368	433.00
LOCATION	L0000272	VOLUME	481926.137	3733442.958	433.00
LOCATION	L0000273	VOLUME	481926.084	3733451.548	433.00



LOCATION L0000274	VOLUME	481926.030	3733460.138	433.00
LOCATION L0000275	VOLUME	481925.977	3733468.728	433.00
LOCATION L0000276	VOLUME	481925.924	3733477.317	433.00
LOCATION L0000277	VOLUME	481925.871	3733485.907	433.00
LOCATION L0000278	VOLUME	481925.818	3733494.497	433.00
LOCATION L0000279	VOLUME	481925.765	3733503.087	433.00
LOCATION L0000280	VOLUME	481925.712	3733511.677	433.00
LOCATION L0000281	VOLUME	481925.658	3733520.267	433.00
LOCATION L0000282	VOLUME	481925.605	3733528.856	433.00
LOCATION L0000283	VOLUME	481927.236	3733537.077	433.00
LOCATION L0000284	VOLUME	481932.183	3733543.492	433.00
LOCATION L0000285	VOLUME	481940.326	3733545.737	433.00
LOCATION L0000286	VOLUME	481948.916	3733545.749	433.00
LOCATION L0000287	VOLUME	481957.506	3733545.762	433.00
LOCATION L0000288	VOLUME	481966.096	3733545.774	433.00
LOCATION L0000289	VOLUME	481974.686	3733545.786	433.00
LOCATION L0000290	VOLUME	481983.276	3733545.798	433.00
LOCATION L0000291	VOLUME	481991.866	3733545.811	433.00
LOCATION L0000292	VOLUME	482000.456	3733545.823	433.00
LOCATION L0000293	VOLUME	482009.046	3733545.835	433.00
LOCATION L0000294	VOLUME	482017.636	3733545.848	433.00
LOCATION L0000295	VOLUME	482026.226	3733545.860	433.00
LOCATION L0000296	VOLUME	482034.816	3733545.872	433.00
LOCATION L0000297	VOLUME	482043.406	3733545.884	433.00
LOCATION L0000298	VOLUME	482051.996	3733545.897	433.00
LOCATION L0000299	VOLUME	482060.586	3733545.909	433.00
LOCATION L0000300	VOLUME	482069.176	3733545.921	433.00

\*\* End of LINE VOLUME Source ID = SLINE3

\*\*

\*\* Line Source Represented by Adjacent Volume Sources

\*\* LINE VOLUME Source ID = SLINE4

\*\* DESCRSRC Onsite 2

\*\* PREFIX

\*\* Length of Side = 8.59

\*\* Configuration = Adjacent

\*\* Emission Rate = 3.397E-06

\*\* Vertical Dimension = 6.99

\*\* SZINIT = 3.25

\*\* Nodes = 2

\*\* 482071.990, 3733417.240, 433.00, 3.49, 4.00

\*\* 481931.105, 3733417.812, 433.00, 3.49, 4.00

\*\*

LOCATION L0000301	VOLUME	482067.695	3733417.258	433.00
LOCATION L0000302	VOLUME	482059.105	3733417.292	433.00
LOCATION L0000303	VOLUME	482050.515	3733417.327	433.00
LOCATION L0000304	VOLUME	482041.925	3733417.362	433.00
LOCATION L0000305	VOLUME	482033.335	3733417.397	433.00
LOCATION L0000306	VOLUME	482024.745	3733417.432	433.00
LOCATION L0000307	VOLUME	482016.155	3733417.467	433.00
LOCATION L0000308	VOLUME	482007.565	3733417.502	433.00



LOCATION L0000309	VOLUME	481998.975	3733417.537	433.00
LOCATION L0000310	VOLUME	481990.385	3733417.571	433.00
LOCATION L0000311	VOLUME	481981.795	3733417.606	433.00
LOCATION L0000312	VOLUME	481973.206	3733417.641	433.00
LOCATION L0000313	VOLUME	481964.616	3733417.676	433.00
LOCATION L0000314	VOLUME	481956.026	3733417.711	433.00
LOCATION L0000315	VOLUME	481947.436	3733417.746	433.00
LOCATION L0000316	VOLUME	481938.846	3733417.781	433.00

\*\* End of LINE VOLUME Source ID = SLINE4

\*\*

\*\* Line Source Represented by Adjacent Volume Sources

\*\* LINE VOLUME Source ID = SLINE6

\*\* DESCRSRC Ethanac 100%

\*\* PREFIX

\*\* Length of Side = 14.00

\*\* Configuration = Adjacent

\*\* Emission Rate = 4.786E-06

\*\* Vertical Dimension = 6.99

\*\* SZINIT = 3.25

\*\* Nodes = 2

\*\* 482092.273, 3733680.890, 433.00, 3.49, 6.51

\*\* 482570.497, 3733674.016, 434.00, 3.49, 6.51

\*\*

LOCATION L0000317	VOLUME	482099.273	3733680.790	433.00
LOCATION L0000318	VOLUME	482113.271	3733680.589	433.00
LOCATION L0000319	VOLUME	482127.270	3733680.387	433.00
LOCATION L0000320	VOLUME	482141.268	3733680.186	433.00
LOCATION L0000321	VOLUME	482155.267	3733679.985	433.00
LOCATION L0000322	VOLUME	482169.265	3733679.784	433.00
LOCATION L0000323	VOLUME	482183.264	3733679.582	433.00
LOCATION L0000324	VOLUME	482197.262	3733679.381	433.00
LOCATION L0000325	VOLUME	482211.261	3733679.180	433.00
LOCATION L0000326	VOLUME	482225.259	3733678.979	433.00
LOCATION L0000327	VOLUME	482239.258	3733678.777	433.00
LOCATION L0000328	VOLUME	482253.257	3733678.576	433.00
LOCATION L0000329	VOLUME	482267.255	3733678.375	433.00
LOCATION L0000330	VOLUME	482281.254	3733678.174	433.00
LOCATION L0000331	VOLUME	482295.252	3733677.972	433.00
LOCATION L0000332	VOLUME	482309.251	3733677.771	433.00
LOCATION L0000333	VOLUME	482323.249	3733677.570	433.07
LOCATION L0000334	VOLUME	482337.248	3733677.369	433.36
LOCATION L0000335	VOLUME	482351.246	3733677.167	433.64
LOCATION L0000336	VOLUME	482365.245	3733676.966	433.82
LOCATION L0000337	VOLUME	482379.244	3733676.765	433.99
LOCATION L0000338	VOLUME	482393.242	3733676.564	434.00
LOCATION L0000339	VOLUME	482407.241	3733676.363	434.00
LOCATION L0000340	VOLUME	482421.239	3733676.161	434.00
LOCATION L0000341	VOLUME	482435.238	3733675.960	434.00
LOCATION L0000342	VOLUME	482449.236	3733675.759	434.00
LOCATION L0000343	VOLUME	482463.235	3733675.558	434.00



LOCATION L0000344	VOLUME	482477.233	3733675.356	434.00
LOCATION L0000345	VOLUME	482491.232	3733675.155	434.00
LOCATION L0000346	VOLUME	482505.231	3733674.954	434.00
LOCATION L0000347	VOLUME	482519.229	3733674.753	434.00
LOCATION L0000348	VOLUME	482533.228	3733674.551	434.00
LOCATION L0000349	VOLUME	482547.226	3733674.350	434.00
LOCATION L0000350	VOLUME	482561.225	3733674.149	434.00

\*\* End of LINE VOLUME Source ID = SLINE6

\*\*

\*\* Line Source Represented by Adjacent Volume Sources

\*\* LINE VOLUME Source ID = SLINE7

\*\* DESCRSRC Barnett 100%

\*\* PREFIX

\*\* Length of Side = 8.59

\*\* Configuration = Adjacent

\*\* Emission Rate = 1.234E-06

\*\* Vertical Dimension = 6.99

\*\* SZINIT = 3.25

\*\* Nodes = 2

\*\* 482091.154, 3733547.029, 433.00, 3.49, 4.00

\*\* 482091.154, 3733670.352, 433.00, 3.49, 4.00

\*\*

LOCATION L0000351	VOLUME	482091.154	3733551.324	433.00
LOCATION L0000352	VOLUME	482091.154	3733559.914	433.00
LOCATION L0000353	VOLUME	482091.154	3733568.504	433.00
LOCATION L0000354	VOLUME	482091.154	3733577.094	433.00
LOCATION L0000355	VOLUME	482091.154	3733585.684	433.00
LOCATION L0000356	VOLUME	482091.154	3733594.274	433.00
LOCATION L0000357	VOLUME	482091.154	3733602.864	433.00
LOCATION L0000358	VOLUME	482091.154	3733611.454	433.00
LOCATION L0000359	VOLUME	482091.154	3733620.044	433.00
LOCATION L0000360	VOLUME	482091.154	3733628.634	433.00
LOCATION L0000361	VOLUME	482091.154	3733637.224	433.00
LOCATION L0000362	VOLUME	482091.154	3733645.814	433.00
LOCATION L0000363	VOLUME	482091.154	3733654.404	433.00
LOCATION L0000364	VOLUME	482091.154	3733662.994	433.00

\*\* End of LINE VOLUME Source ID = SLINE7

\*\*

\*\* Line Source Represented by Adjacent Volume Sources

\*\* LINE VOLUME Source ID = SLINE8

\*\* DESCRSRC Barnett 70%

\*\* PREFIX

\*\* Length of Side = 8.59

\*\* Configuration = Adjacent

\*\* Emission Rate = 9.028E-07

\*\* Vertical Dimension = 6.99

\*\* SZINIT = 3.25

\*\* Nodes = 2

\*\* 482090.724, 3733545.310, 433.00, 3.49, 4.00

\*\* 482090.724, 3733416.401, 433.00, 3.49, 4.00



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** -----
LOCATION L0000365      VOLUME  482090.724 3733541.015 433.00
LOCATION L0000366      VOLUME  482090.724 3733532.425 433.00
LOCATION L0000367      VOLUME  482090.724 3733523.835 433.00
LOCATION L0000368      VOLUME  482090.724 3733515.245 433.00
LOCATION L0000369      VOLUME  482090.724 3733506.655 433.00
LOCATION L0000370      VOLUME  482090.724 3733498.065 433.00
LOCATION L0000371      VOLUME  482090.724 3733489.475 433.00
LOCATION L0000372      VOLUME  482090.724 3733480.885 433.00
LOCATION L0000373      VOLUME  482090.724 3733472.295 433.00
LOCATION L0000374      VOLUME  482090.724 3733463.705 433.00
LOCATION L0000375      VOLUME  482090.724 3733455.115 433.00
LOCATION L0000376      VOLUME  482090.724 3733446.525 433.00
LOCATION L0000377      VOLUME  482090.724 3733437.935 433.00
LOCATION L0000378      VOLUME  482090.724 3733429.345 433.00
LOCATION L0000379      VOLUME  482090.724 3733420.755 433.00
** End of LINE VOLUME Source ID = SLINE8
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE9
** DESCRSRC Barnett 30%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 3.785E-07
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 482090.292, 3733416.128, 433.00, 3.49, 4.00
** 482089.237, 3733289.988, 433.00, 3.49, 4.00
** -----
LOCATION L0000380      VOLUME  482090.256 3733411.833 433.00
LOCATION L0000381      VOLUME  482090.185 3733403.243 433.00
LOCATION L0000382      VOLUME  482090.113 3733394.654 433.00
LOCATION L0000383      VOLUME  482090.041 3733386.064 433.00
LOCATION L0000384      VOLUME  482089.969 3733377.474 433.00
LOCATION L0000385      VOLUME  482089.897 3733368.885 433.00
LOCATION L0000386      VOLUME  482089.825 3733360.295 433.00
LOCATION L0000387      VOLUME  482089.753 3733351.705 433.00
LOCATION L0000388      VOLUME  482089.681 3733343.116 433.00
LOCATION L0000389      VOLUME  482089.610 3733334.526 433.00
LOCATION L0000390      VOLUME  482089.538 3733325.936 433.00
LOCATION L0000391      VOLUME  482089.466 3733317.346 433.00
LOCATION L0000392      VOLUME  482089.394 3733308.757 433.00
LOCATION L0000393      VOLUME  482089.322 3733300.167 433.00
LOCATION L0000394      VOLUME  482089.250 3733291.577 433.00
** End of LINE VOLUME Source ID = SLINE9
LOCATION STCK1          POINT    481996.400 3733492.460      433.000
LOCATION STCK2          POINT    481998.657 3733366.754      433.000
** Source Parameters **

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\*\* LINE VOLUME Source ID = SLINE1

SRCPARAM	L0000220	0.0000009953	3.49	4.00	3.25
SRCPARAM	L0000221	0.0000009953	3.49	4.00	3.25
SRCPARAM	L0000222	0.0000009953	3.49	4.00	3.25
SRCPARAM	L0000223	0.0000009953	3.49	4.00	3.25
SRCPARAM	L0000224	0.0000009953	3.49	4.00	3.25
SRCPARAM	L0000225	0.0000009953	3.49	4.00	3.25
SRCPARAM	L0000226	0.0000009953	3.49	4.00	3.25
SRCPARAM	L0000227	0.0000009953	3.49	4.00	3.25
SRCPARAM	L0000228	0.0000009953	3.49	4.00	3.25

\*\*

\*\* LINE VOLUME Source ID = SLINE2

SRCPARAM	L0000229	0.0000009953	3.49	4.00	3.25
SRCPARAM	L0000230	0.0000009953	3.49	4.00	3.25
SRCPARAM	L0000231	0.0000009953	3.49	4.00	3.25
SRCPARAM	L0000232	0.0000009953	3.49	4.00	3.25
SRCPARAM	L0000233	0.0000009953	3.49	4.00	3.25
SRCPARAM	L0000234	0.0000009953	3.49	4.00	3.25
SRCPARAM	L0000235	0.0000009953	3.49	4.00	3.25
SRCPARAM	L0000236	0.0000009953	3.49	4.00	3.25
SRCPARAM	L0000237	0.0000009953	3.49	4.00	3.25

\*\*

\*\* LINE VOLUME Source ID = SLINE3

SRCPARAM	L0000238	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000239	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000240	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000241	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000242	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000243	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000244	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000245	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000246	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000247	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000248	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000249	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000250	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000251	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000252	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000253	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000254	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000255	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000256	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000257	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000258	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000259	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000260	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000261	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000262	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000263	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000264	0.000000206	3.49	4.00	3.25



SRCPARAM	L0000265	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000266	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000267	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000268	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000269	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000270	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000271	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000272	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000273	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000274	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000275	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000276	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000277	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000278	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000279	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000280	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000281	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000282	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000283	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000284	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000285	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000286	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000287	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000288	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000289	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000290	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000291	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000292	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000293	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000294	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000295	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000296	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000297	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000298	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000299	0.000000206	3.49	4.00	3.25
SRCPARAM	L0000300	0.000000206	3.49	4.00	3.25

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\*\* LINE VOLUME Source ID = SLINE4

SRCPARAM	L0000301	0.0000002123	3.49	4.00	3.25
SRCPARAM	L0000302	0.0000002123	3.49	4.00	3.25
SRCPARAM	L0000303	0.0000002123	3.49	4.00	3.25
SRCPARAM	L0000304	0.0000002123	3.49	4.00	3.25
SRCPARAM	L0000305	0.0000002123	3.49	4.00	3.25
SRCPARAM	L0000306	0.0000002123	3.49	4.00	3.25
SRCPARAM	L0000307	0.0000002123	3.49	4.00	3.25
SRCPARAM	L0000308	0.0000002123	3.49	4.00	3.25
SRCPARAM	L0000309	0.0000002123	3.49	4.00	3.25
SRCPARAM	L0000310	0.0000002123	3.49	4.00	3.25
SRCPARAM	L0000311	0.0000002123	3.49	4.00	3.25
SRCPARAM	L0000312	0.0000002123	3.49	4.00	3.25



SRCPARAM	L0000313	0.0000002123	3.49	4.00	3.25
SRCPARAM	L0000314	0.0000002123	3.49	4.00	3.25
SRCPARAM	L0000315	0.0000002123	3.49	4.00	3.25
SRCPARAM	L0000316	0.0000002123	3.49	4.00	3.25

\*\*

\*\* LINE VOLUME Source ID = SLINE6

SRCPARAM	L0000317	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000318	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000319	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000320	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000321	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000322	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000323	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000324	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000325	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000326	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000327	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000328	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000329	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000330	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000331	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000332	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000333	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000334	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000335	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000336	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000337	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000338	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000339	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000340	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000341	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000342	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000343	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000344	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000345	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000346	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000347	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000348	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000349	0.0000001408	3.49	6.51	3.25
SRCPARAM	L0000350	0.0000001408	3.49	6.51	3.25

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\*\* LINE VOLUME Source ID = SLINE7

SRCPARAM	L0000351	0.00000008814	3.49	4.00	3.25
SRCPARAM	L0000352	0.00000008814	3.49	4.00	3.25
SRCPARAM	L0000353	0.00000008814	3.49	4.00	3.25
SRCPARAM	L0000354	0.00000008814	3.49	4.00	3.25
SRCPARAM	L0000355	0.00000008814	3.49	4.00	3.25
SRCPARAM	L0000356	0.00000008814	3.49	4.00	3.25
SRCPARAM	L0000357	0.00000008814	3.49	4.00	3.25
SRCPARAM	L0000358	0.00000008814	3.49	4.00	3.25



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**	LINE VOLUME Source ID = SLINE8					
	SRCPARAM	L0000365	0.00000006019	3.49	4.00	3.25
	SRCPARAM	L0000366	0.00000006019	3.49	4.00	3.25
	SRCPARAM	L0000367	0.00000006019	3.49	4.00	3.25
	SRCPARAM	L0000368	0.00000006019	3.49	4.00	3.25
	SRCPARAM	L0000369	0.00000006019	3.49	4.00	3.25
	SRCPARAM	L0000370	0.00000006019	3.49	4.00	3.25
	SRCPARAM	L0000371	0.00000006019	3.49	4.00	3.25
	SRCPARAM	L0000372	0.00000006019	3.49	4.00	3.25
	SRCPARAM	L0000373	0.00000006019	3.49	4.00	3.25
	SRCPARAM	L0000374	0.00000006019	3.49	4.00	3.25
	SRCPARAM	L0000375	0.00000006019	3.49	4.00	3.25
	SRCPARAM	L0000376	0.00000006019	3.49	4.00	3.25
	SRCPARAM	L0000377	0.00000006019	3.49	4.00	3.25
	SRCPARAM	L0000378	0.00000006019	3.49	4.00	3.25
	SRCPARAM	L0000379	0.00000006019	3.49	4.00	3.25
-----						
**	LINE VOLUME Source ID = SLINE9					
	SRCPARAM	L0000380	0.00000002523	3.49	4.00	3.25
	SRCPARAM	L0000381	0.00000002523	3.49	4.00	3.25
	SRCPARAM	L0000382	0.00000002523	3.49	4.00	3.25
	SRCPARAM	L0000383	0.00000002523	3.49	4.00	3.25
	SRCPARAM	L0000384	0.00000002523	3.49	4.00	3.25
	SRCPARAM	L0000385	0.00000002523	3.49	4.00	3.25
	SRCPARAM	L0000386	0.00000002523	3.49	4.00	3.25
	SRCPARAM	L0000387	0.00000002523	3.49	4.00	3.25
	SRCPARAM	L0000388	0.00000002523	3.49	4.00	3.25
	SRCPARAM	L0000389	0.00000002523	3.49	4.00	3.25
	SRCPARAM	L0000390	0.00000002523	3.49	4.00	3.25
	SRCPARAM	L0000391	0.00000002523	3.49	4.00	3.25
	SRCPARAM	L0000392	0.00000002523	3.49	4.00	3.25
	SRCPARAM	L0000393	0.00000002523	3.49	4.00	3.25
	SRCPARAM	L0000394	0.00000002523	3.49	4.00	3.25
-----						
**	SRCPARAM	STCK1	0.006299894	3.040	765.800	54.28
	SRCPARAM	STCK2	0.006299894	3.040	765.800	54.28
	URBANSRC	ALL				
**	Variable Emissions Type: "By Hour / Seven Days (HRDOW7)"					
**	Variable Emission Scenario: "pump"					
	EMISFACT	STCK1	HRDOW7	0.0	0.0	0.0
	EMISFACT	STCK1	HRDOW7	0.0	0.0	0.0
	EMISFACT	STCK1	HRDOW7	0.0	0.0	0.0



EMISFACT STCK1	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK1	HRDOW7	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK1	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK1	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK1	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK1	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK1	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK1	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK1	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK1	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK1	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK1	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK1	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK1	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK1	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK1	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK1	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK2	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK2	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK2	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK2	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK2	HRDOW7	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK2	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK2	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK2	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK2	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK2	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK2	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK2	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK2	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK2	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK2	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK2	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK2	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK2	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK2	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT STCK2	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SRCGROUP ALL

SO FINISHED

\*\*

\*\*\*\*\*

\*\* AERMOD Receptor Pathway

\*\*\*\*\*

\*\*

\*\*

RE STARTING

INCLUDED "14775 Ops.rou"

RE FINISHED



```

**
*****
** AERMOD Meteorology Pathway
*****
**
**
ME STARTING
  SURFFILE PERI_V9_ADJU\PERI_v9.SFC
  PROFFILE PERI_V9_ADJU\PERI_v9.PFL
  SURFDATA 3171 2010
  UAIRDATA 3190 2010
  SITEDATA 99999 2010
  PROFBASE 442.0 METERS
ME FINISHED
**
*****
** AERMOD Output Pathway
*****
**
**
OU STARTING
** Auto-Generated Plotfiles
  PLOTFILE ANNUAL ALL "14775 Ops.AD\AN00GALL.PLT" 31
  SUMMFILE "14775 Ops.sum"
OU FINISHED

```

\*\*\* Message Summary For AERMOD Model Setup \*\*\*

----- Summary of Total Messages -----

```

A Total of          0 Fatal Error Message(s)
A Total of          4 Warning Message(s)
A Total of          0 Informational Message(s)

```

\*\*\*\*\* FATAL ERROR MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

```

SO W320      532      PPARM: Input Parameter May Be Out-of-Range for Parameter
VS
SO W320      533      PPARM: Input Parameter May Be Out-of-Range for Parameter
VS
ME W186      604      MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
0.50
ME W187      604      MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

```



\*\*\*\*\*  
\*\*\* SETUP Finishes Successfully \*\*\*  
\*\*\*\*\*

▲ \*\*\* AERMOD - VERSION 22112 \*\*\* \*\*\* C:\Users\Michael Tirohn\Desktop\HRAs\14775  
Ethanac and Barnett\14775 \*\*\* 05/22/23  
\*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
\*\*\* 13:15:37

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\*\*\* MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ\_U\*

\*\*\* MODEL SETUP OPTIONS SUMMARY

\*\*\*

\*\* Model Options Selected:

- \* Model Uses Regulatory DEFAULT Options
- \* Model Is Setup For Calculation of Average CONCentration Values.
- \* NO GAS DEPOSITION Data Provided.
- \* NO PARTICLE DEPOSITION Data Provided.
- \* Model Uses NO DRY DEPLETION. DDPLETE = F
- \* Model Uses NO WET DEPLETION. WETDPLT = F
- \* Stack-tip Downwash.
- \* Model Accounts for ELEVated Terrain Effects.
- \* Use Calms Processing Routine.
- \* Use Missing Data Processing Routine.
- \* No Exponential Decay.
- \* Model Uses URBAN Dispersion Algorithm for the SBL for 177 Source(s),  
for Total of 1 Urban Area(s):  
Urban Population = 2189641.0 ; Urban Roughness Length = 1.000 m
- \* Urban Roughness Length of 1.0 Meter Used.
- \* ADJ\_U\* - Use ADJ\_U\* option for SBL in AERMET
- \* CCVR\_Sub - Meteorological data includes CCVR substitutions
- \* TEMP\_Sub - Meteorological data includes TEMP substitutions
- \* Model Assumes No FLAGPOLE Receptor Heights.
- \* The User Specified a Pollutant Type of: DPM

\*\*Model Calculates ANNUAL Averages Only

\*\*This Run Includes: 177 Source(s); 1 Source Group(s); and 25  
Receptor(s)

with: 2 POINT(s), including  
0 POINTCAP(s) and 0 POINTHOR(s)  
and: 175 VOLUME source(s)  
and: 0 AREA type source(s)  
and: 0 LINE source(s)  
and: 0 RLINE/RLINEXT source(s)



and: 0 OPENPIT source(s)  
and: 0 BUOYANT LINE source(s) with a total of 0 line(s)  
and: 0 SWPOINT source(s)

\*\*Model Set To Continue RUNning After the Setup Testing.

\*\*The AERMET Input Meteorological Data Version Date: 16216

\*\*Output Options Selected:

Model Outputs Tables of ANNUAL Averages by Receptor

Model Outputs External File(s) of High Values for Plotting (PLOTFILE  
Keyword)

Model Outputs Separate Summary File of High Ranked Values (SUMMFILE  
Keyword)

\*\*NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours  
m for Missing  
Hours  
b for Both Calm  
and Missing Hours

\*\*Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 442.00 ; Decay  
Coef. = 0.000 ; Rot. Angle = 0.0  
Emission Units = GRAMS/SEC ;  
Emission Rate Unit Factor = 0.10000E+07  
Output Units = MICROGRAMS/M\*\*3

\*\*Approximate Storage Requirements of Model = 3.8 MB of RAM.

\*\*Input Runstream File: aermod.inp

\*\*Output Print File: aermod.out

\*\*Detailed Error/Message File: 14775 Ops.err

\*\*File for Summary of Results: 14775 Ops.sum

▲ \*\*\* AERMOD - VERSION 22112 \*\*\* \*\*\* C:\Users\Michael Tirohn\Desktop\HRAs\14775  
Ethanac and Barnett\14775 \*\*\* 05/22/23  
\*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\*\*\* POINT SOURCE DATA \*\*\*



STACK	STACK	BLDG	URBAN	CAP/	EMIS	RATE	BASE	STACK	STACK
SOURCE	PART.	(GRAMS/SEC)	X	Y	ELEV.	HEIGHT	TEMP.		
EXIT VEL.	DIAMETER	EXISTS	SOURCE	HOR	SCALAR				
ID	CATS.		(METERS)	(METERS)	(METERS)	(METERS)	(DEG.K)		
(M/SEC)	(METERS)		VARY BY						

STCK1	0	0.62999E-02	481996.4	3733492.5	433.0	3.04	765.80		
54.28	0.12	NO	YES	NO	HRDOW7				
STCK2	0	0.62999E-02	481998.7	3733366.8	433.0	3.04	765.80		
54.28	0.12	NO	YES	NO	HRDOW7				
*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\14775 Ethanac and Barnett\14775 *** 05/22/23 *** AERMET - VERSION 16216 *** *** 13:15:37									

\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*  
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\*\*\* VOLUME SOURCE DATA \*\*\*

INIT.	URBAN	NUMBER	EMISSION	RATE	BASE	RELEASE	INIT.
SOURCE	PART.	(GRAMS/SEC)	X	Y	ELEV.	HEIGHT	SY
SZ	SOURCE	SCALAR	VARY				
ID	CATS.		(METERS)	(METERS)	(METERS)	(METERS)	(METERS)
(METERS)	BY						

L0000220	0	0.99530E-06	481957.3	3733438.6	433.0	3.49	4.00
3.25 YES							
L0000221	0	0.99530E-06	481965.9	3733438.6	433.0	3.49	4.00
3.25 YES							
L0000222	0	0.99530E-06	481974.5	3733438.6	433.0	3.49	4.00
3.25 YES							
L0000223	0	0.99530E-06	481983.1	3733438.6	433.0	3.49	4.00
3.25 YES							
L0000224	0	0.99530E-06	481991.7	3733438.6	433.0	3.49	4.00
3.25 YES							
L0000225	0	0.99530E-06	482000.3	3733438.6	433.0	3.49	4.00
3.25 YES							
L0000226	0	0.99530E-06	482008.9	3733438.6	433.0	3.49	4.00
3.25 YES							
L0000227	0	0.99530E-06	482017.5	3733438.6	433.0	3.49	4.00
3.25 YES							
L0000228	0	0.99530E-06	482026.0	3733438.6	433.0	3.49	4.00



3.25	YES							
L0000229		0	0.99530E-06	481957.3	3733311.4	433.0	3.49	4.00
3.25	YES							
L0000230		0	0.99530E-06	481965.9	3733311.4	433.0	3.49	4.00
3.25	YES							
L0000231		0	0.99530E-06	481974.5	3733311.4	433.0	3.49	4.00
3.25	YES							
L0000232		0	0.99530E-06	481983.1	3733311.4	433.0	3.49	4.00
3.25	YES							
L0000233		0	0.99530E-06	481991.7	3733311.4	433.0	3.49	4.00
3.25	YES							
L0000234		0	0.99530E-06	482000.3	3733311.4	433.0	3.49	4.00
3.25	YES							
L0000235		0	0.99530E-06	482008.9	3733311.4	433.0	3.49	4.00
3.25	YES							
L0000236		0	0.99530E-06	482017.5	3733311.4	433.0	3.49	4.00
3.25	YES							
L0000237		0	0.99530E-06	482026.0	3733311.4	433.0	3.49	4.00
3.25	YES							
L0000238		0	0.20600E-06	482069.2	3733291.8	433.0	3.49	4.00
3.25	YES							
L0000239		0	0.20600E-06	482060.6	3733291.7	433.0	3.49	4.00
3.25	YES							
L0000240		0	0.20600E-06	482052.0	3733291.7	433.0	3.49	4.00
3.25	YES							
L0000241		0	0.20600E-06	482043.5	3733291.7	433.0	3.49	4.00
3.25	YES							
L0000242		0	0.20600E-06	482034.9	3733291.6	433.0	3.49	4.00
3.25	YES							
L0000243		0	0.20600E-06	482026.3	3733291.6	433.0	3.49	4.00
3.25	YES							
L0000244		0	0.20600E-06	482017.7	3733291.6	433.0	3.49	4.00
3.25	YES							
L0000245		0	0.20600E-06	482009.1	3733291.5	433.0	3.49	4.00
3.25	YES							
L0000246		0	0.20600E-06	482000.5	3733291.5	433.0	3.49	4.00
3.25	YES							
L0000247		0	0.20600E-06	481991.9	3733291.5	433.0	3.49	4.00
3.25	YES							
L0000248		0	0.20600E-06	481983.3	3733291.4	433.0	3.49	4.00
3.25	YES							
L0000249		0	0.20600E-06	481974.7	3733291.4	433.0	3.49	4.00
3.25	YES							
L0000250		0	0.20600E-06	481966.1	3733291.4	433.0	3.49	4.00
3.25	YES							
L0000251		0	0.20600E-06	481957.6	3733291.3	433.0	3.49	4.00
3.25	YES							
L0000252		0	0.20600E-06	481949.0	3733291.3	433.0	3.49	4.00
3.25	YES							
L0000253		0	0.20600E-06	481940.4	3733291.2	433.0	3.49	4.00



3.25	YES							
L0000254		0	0.20600E-06	481931.9	3733292.1	433.0	3.49	4.00
3.25	YES							
L0000255		0	0.20600E-06	481925.8	3733297.1	433.0	3.49	4.00
3.25	YES							
L0000256		0	0.20600E-06	481925.1	3733305.5	433.0	3.49	4.00
3.25	YES							
L0000257		0	0.20600E-06	481925.1	3733314.1	433.0	3.49	4.00
3.25	YES							
L0000258		0	0.20600E-06	481925.2	3733322.7	433.0	3.49	4.00
3.25	YES							
L0000259		0	0.20600E-06	481925.3	3733331.3	433.0	3.49	4.00

3.25 YES  
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 Ethanac and Barnett\14775 \*\*\* 05/22/23  
 \*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
 \*\*\* 13:15:37

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\*\*\* VOLUME SOURCE DATA \*\*\*

INIT.	URBAN	NUMBER EMISSION RATE	BASE	RELEASE	INIT.
SOURCE	SCALAR	EMISSION RATE	ELEV.	HEIGHT	SY
SZ	ID	PART. (GRAMS/SEC)	X	Y	
(METERS)	CATS.	BY	(METERS)	(METERS)	(METERS)

L0000260		0	0.20600E-06	481925.3	3733339.9	433.0	3.49	4.00
3.25	YES							
L0000261		0	0.20600E-06	481925.4	3733348.5	433.0	3.49	4.00
3.25	YES							
L0000262		0	0.20600E-06	481925.5	3733357.1	433.0	3.49	4.00
3.25	YES							
L0000263		0	0.20600E-06	481925.5	3733365.7	433.0	3.49	4.00
3.25	YES							
L0000264		0	0.20600E-06	481925.6	3733374.2	433.0	3.49	4.00
3.25	YES							
L0000265		0	0.20600E-06	481925.7	3733382.8	433.0	3.49	4.00
3.25	YES							
L0000266		0	0.20600E-06	481925.8	3733391.4	433.0	3.49	4.00
3.25	YES							
L0000267		0	0.20600E-06	481925.8	3733400.0	433.0	3.49	4.00
3.25	YES							
L0000268		0	0.20600E-06	481925.9	3733408.6	433.0	3.49	4.00



3.25	YES							
L0000269		0	0.20600E-06	481926.0	3733417.2	433.0	3.49	4.00
3.25	YES							
L0000270		0	0.20600E-06	481926.0	3733425.8	433.0	3.49	4.00
3.25	YES							
L0000271		0	0.20600E-06	481926.1	3733434.4	433.0	3.49	4.00
3.25	YES							
L0000272		0	0.20600E-06	481926.1	3733443.0	433.0	3.49	4.00
3.25	YES							
L0000273		0	0.20600E-06	481926.1	3733451.5	433.0	3.49	4.00
3.25	YES							
L0000274		0	0.20600E-06	481926.0	3733460.1	433.0	3.49	4.00
3.25	YES							
L0000275		0	0.20600E-06	481926.0	3733468.7	433.0	3.49	4.00
3.25	YES							
L0000276		0	0.20600E-06	481925.9	3733477.3	433.0	3.49	4.00
3.25	YES							
L0000277		0	0.20600E-06	481925.9	3733485.9	433.0	3.49	4.00
3.25	YES							
L0000278		0	0.20600E-06	481925.8	3733494.5	433.0	3.49	4.00
3.25	YES							
L0000279		0	0.20600E-06	481925.8	3733503.1	433.0	3.49	4.00
3.25	YES							
L0000280		0	0.20600E-06	481925.7	3733511.7	433.0	3.49	4.00
3.25	YES							
L0000281		0	0.20600E-06	481925.7	3733520.3	433.0	3.49	4.00
3.25	YES							
L0000282		0	0.20600E-06	481925.6	3733528.9	433.0	3.49	4.00
3.25	YES							
L0000283		0	0.20600E-06	481927.2	3733537.1	433.0	3.49	4.00
3.25	YES							
L0000284		0	0.20600E-06	481932.2	3733543.5	433.0	3.49	4.00
3.25	YES							
L0000285		0	0.20600E-06	481940.3	3733545.7	433.0	3.49	4.00
3.25	YES							
L0000286		0	0.20600E-06	481948.9	3733545.7	433.0	3.49	4.00
3.25	YES							
L0000287		0	0.20600E-06	481957.5	3733545.8	433.0	3.49	4.00
3.25	YES							
L0000288		0	0.20600E-06	481966.1	3733545.8	433.0	3.49	4.00
3.25	YES							
L0000289		0	0.20600E-06	481974.7	3733545.8	433.0	3.49	4.00
3.25	YES							
L0000290		0	0.20600E-06	481983.3	3733545.8	433.0	3.49	4.00
3.25	YES							
L0000291		0	0.20600E-06	481991.9	3733545.8	433.0	3.49	4.00
3.25	YES							
L0000292		0	0.20600E-06	482000.5	3733545.8	433.0	3.49	4.00
3.25	YES							
L0000293		0	0.20600E-06	482009.0	3733545.8	433.0	3.49	4.00



3.25	YES							
L0000294		0	0.20600E-06	482017.6	3733545.8	433.0	3.49	4.00
3.25	YES							
L0000295		0	0.20600E-06	482026.2	3733545.9	433.0	3.49	4.00
3.25	YES							
L0000296		0	0.20600E-06	482034.8	3733545.9	433.0	3.49	4.00
3.25	YES							
L0000297		0	0.20600E-06	482043.4	3733545.9	433.0	3.49	4.00
3.25	YES							
L0000298		0	0.20600E-06	482052.0	3733545.9	433.0	3.49	4.00
3.25	YES							
L0000299		0	0.20600E-06	482060.6	3733545.9	433.0	3.49	4.00

3.25 YES  
 \*\*\* AERMOD - VERSION 22112 \*\*\* C:\Users\Michael Tirohn\Desktop\HRAs\14775  
 Ethanac and Barnett\14775 \*\*\* 05/22/23  
 \*\*\* AERMET - VERSION 16216 \*\*\*  
 \*\*\* 13:15:37

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\*\*\* VOLUME SOURCE DATA \*\*\*

INIT.	URBAN	NUMBER EMISSION RATE	BASE	RELEASE	INIT.
SOURCE	SCALAR	EMISSION RATE	ELEV.	HEIGHT	SY
SZ	ID	PART. (GRAMS/SEC)	X	Y	
(METERS)	CATS.	BY	(METERS)	(METERS)	(METERS)

L0000300		0	0.20600E-06	482069.2	3733545.9	433.0	3.49	4.00
3.25	YES							
L0000301		0	0.21230E-06	482067.7	3733417.3	433.0	3.49	4.00
3.25	YES							
L0000302		0	0.21230E-06	482059.1	3733417.3	433.0	3.49	4.00
3.25	YES							
L0000303		0	0.21230E-06	482050.5	3733417.3	433.0	3.49	4.00
3.25	YES							
L0000304		0	0.21230E-06	482041.9	3733417.4	433.0	3.49	4.00
3.25	YES							
L0000305		0	0.21230E-06	482033.3	3733417.4	433.0	3.49	4.00
3.25	YES							
L0000306		0	0.21230E-06	482024.7	3733417.4	433.0	3.49	4.00
3.25	YES							
L0000307		0	0.21230E-06	482016.2	3733417.5	433.0	3.49	4.00
3.25	YES							
L0000308		0	0.21230E-06	482007.6	3733417.5	433.0	3.49	4.00



3.25	YES							
L0000309		0	0.21230E-06	481999.0	3733417.5	433.0	3.49	4.00
3.25	YES							
L0000310		0	0.21230E-06	481990.4	3733417.6	433.0	3.49	4.00
3.25	YES							
L0000311		0	0.21230E-06	481981.8	3733417.6	433.0	3.49	4.00
3.25	YES							
L0000312		0	0.21230E-06	481973.2	3733417.6	433.0	3.49	4.00
3.25	YES							
L0000313		0	0.21230E-06	481964.6	3733417.7	433.0	3.49	4.00
3.25	YES							
L0000314		0	0.21230E-06	481956.0	3733417.7	433.0	3.49	4.00
3.25	YES							
L0000315		0	0.21230E-06	481947.4	3733417.7	433.0	3.49	4.00
3.25	YES							
L0000316		0	0.21230E-06	481938.8	3733417.8	433.0	3.49	4.00
3.25	YES							
L0000317		0	0.14080E-06	482099.3	3733680.8	433.0	3.49	6.51
3.25	YES							
L0000318		0	0.14080E-06	482113.3	3733680.6	433.0	3.49	6.51
3.25	YES							
L0000319		0	0.14080E-06	482127.3	3733680.4	433.0	3.49	6.51
3.25	YES							
L0000320		0	0.14080E-06	482141.3	3733680.2	433.0	3.49	6.51
3.25	YES							
L0000321		0	0.14080E-06	482155.3	3733680.0	433.0	3.49	6.51
3.25	YES							
L0000322		0	0.14080E-06	482169.3	3733679.8	433.0	3.49	6.51
3.25	YES							
L0000323		0	0.14080E-06	482183.3	3733679.6	433.0	3.49	6.51
3.25	YES							
L0000324		0	0.14080E-06	482197.3	3733679.4	433.0	3.49	6.51
3.25	YES							
L0000325		0	0.14080E-06	482211.3	3733679.2	433.0	3.49	6.51
3.25	YES							
L0000326		0	0.14080E-06	482225.3	3733679.0	433.0	3.49	6.51
3.25	YES							
L0000327		0	0.14080E-06	482239.3	3733678.8	433.0	3.49	6.51
3.25	YES							
L0000328		0	0.14080E-06	482253.3	3733678.6	433.0	3.49	6.51
3.25	YES							
L0000329		0	0.14080E-06	482267.3	3733678.4	433.0	3.49	6.51
3.25	YES							
L0000330		0	0.14080E-06	482281.3	3733678.2	433.0	3.49	6.51
3.25	YES							
L0000331		0	0.14080E-06	482295.3	3733678.0	433.0	3.49	6.51
3.25	YES							
L0000332		0	0.14080E-06	482309.3	3733677.8	433.0	3.49	6.51
3.25	YES							
L0000333		0	0.14080E-06	482323.2	3733677.6	433.1	3.49	6.51



3.25	YES							
L0000334		0	0.14080E-06	482337.2	3733677.4	433.4	3.49	6.51
3.25	YES							
L0000335		0	0.14080E-06	482351.2	3733677.2	433.6	3.49	6.51
3.25	YES							
L0000336		0	0.14080E-06	482365.2	3733677.0	433.8	3.49	6.51
3.25	YES							
L0000337		0	0.14080E-06	482379.2	3733676.8	434.0	3.49	6.51
3.25	YES							
L0000338		0	0.14080E-06	482393.2	3733676.6	434.0	3.49	6.51
3.25	YES							
L0000339		0	0.14080E-06	482407.2	3733676.4	434.0	3.49	6.51

3.25 YES  
 \*\*\* AERMOD - VERSION 22112 \*\*\* \*\*\* C:\Users\Michael Tirohn\Desktop\HRAs\14775  
 Ethanac and Barnett\14775 \*\*\* 05/22/23  
 \*\*\* AERMET - VERSION 16216 \*\*\* \*\*\*  
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 \*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\*\*\* VOLUME SOURCE DATA \*\*\*

INIT.	URBAN	NUMBER EMISSION RATE	BASE	RELEASE	INIT.
SOURCE	SCALAR VARY	(GRAMS/SEC)	ELEV.	HEIGHT	SY
SZ	ID	CATS.	(METERS)	(METERS)	(METERS)
(METERS)	BY				

L0000340	0	0.14080E-06	482421.2	3733676.2	434.0	3.49	6.51
3.25 YES							
L0000341	0	0.14080E-06	482435.2	3733676.0	434.0	3.49	6.51
3.25 YES							
L0000342	0	0.14080E-06	482449.2	3733675.8	434.0	3.49	6.51
3.25 YES							
L0000343	0	0.14080E-06	482463.2	3733675.6	434.0	3.49	6.51
3.25 YES							
L0000344	0	0.14080E-06	482477.2	3733675.4	434.0	3.49	6.51
3.25 YES							
L0000345	0	0.14080E-06	482491.2	3733675.2	434.0	3.49	6.51
3.25 YES							
L0000346	0	0.14080E-06	482505.2	3733675.0	434.0	3.49	6.51
3.25 YES							
L0000347	0	0.14080E-06	482519.2	3733674.8	434.0	3.49	6.51
3.25 YES							
L0000348	0	0.14080E-06	482533.2	3733674.6	434.0	3.49	6.51



3.25	YES							
L0000349		0	0.14080E-06	482547.2	3733674.3	434.0	3.49	6.51
3.25	YES							
L0000350		0	0.14080E-06	482561.2	3733674.1	434.0	3.49	6.51
3.25	YES							
L0000351		0	0.88140E-07	482091.2	3733551.3	433.0	3.49	4.00
3.25	YES							
L0000352		0	0.88140E-07	482091.2	3733559.9	433.0	3.49	4.00
3.25	YES							
L0000353		0	0.88140E-07	482091.2	3733568.5	433.0	3.49	4.00
3.25	YES							
L0000354		0	0.88140E-07	482091.2	3733577.1	433.0	3.49	4.00
3.25	YES							
L0000355		0	0.88140E-07	482091.2	3733585.7	433.0	3.49	4.00
3.25	YES							
L0000356		0	0.88140E-07	482091.2	3733594.3	433.0	3.49	4.00
3.25	YES							
L0000357		0	0.88140E-07	482091.2	3733602.9	433.0	3.49	4.00
3.25	YES							
L0000358		0	0.88140E-07	482091.2	3733611.5	433.0	3.49	4.00
3.25	YES							
L0000359		0	0.88140E-07	482091.2	3733620.0	433.0	3.49	4.00
3.25	YES							
L0000360		0	0.88140E-07	482091.2	3733628.6	433.0	3.49	4.00
3.25	YES							
L0000361		0	0.88140E-07	482091.2	3733637.2	433.0	3.49	4.00
3.25	YES							
L0000362		0	0.88140E-07	482091.2	3733645.8	433.0	3.49	4.00
3.25	YES							
L0000363		0	0.88140E-07	482091.2	3733654.4	433.0	3.49	4.00
3.25	YES							
L0000364		0	0.88140E-07	482091.2	3733663.0	433.0	3.49	4.00
3.25	YES							
L0000365		0	0.60190E-07	482090.7	3733541.0	433.0	3.49	4.00
3.25	YES							
L0000366		0	0.60190E-07	482090.7	3733532.4	433.0	3.49	4.00
3.25	YES							
L0000367		0	0.60190E-07	482090.7	3733523.8	433.0	3.49	4.00
3.25	YES							
L0000368		0	0.60190E-07	482090.7	3733515.2	433.0	3.49	4.00
3.25	YES							
L0000369		0	0.60190E-07	482090.7	3733506.7	433.0	3.49	4.00
3.25	YES							
L0000370		0	0.60190E-07	482090.7	3733498.1	433.0	3.49	4.00
3.25	YES							
L0000371		0	0.60190E-07	482090.7	3733489.5	433.0	3.49	4.00
3.25	YES							
L0000372		0	0.60190E-07	482090.7	3733480.9	433.0	3.49	4.00
3.25	YES							
L0000373		0	0.60190E-07	482090.7	3733472.3	433.0	3.49	4.00



3.25	YES	L0000374	0	0.60190E-07	482090.7	3733463.7	433.0	3.49	4.00
3.25	YES	L0000375	0	0.60190E-07	482090.7	3733455.1	433.0	3.49	4.00
3.25	YES	L0000376	0	0.60190E-07	482090.7	3733446.5	433.0	3.49	4.00
3.25	YES	L0000377	0	0.60190E-07	482090.7	3733437.9	433.0	3.49	4.00
3.25	YES	L0000378	0	0.60190E-07	482090.7	3733429.3	433.0	3.49	4.00
3.25	YES	L0000379	0	0.60190E-07	482090.7	3733420.8	433.0	3.49	4.00

3.25 YES  
 \*\*\* AERMOD - VERSION 22112 \*\*\* C:\Users\Michael Tirohn\Desktop\HRAs\14775  
 Ethanac and Barnett\14775 \*\*\* 05/22/23  
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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\*\*\* VOLUME SOURCE DATA \*\*\*

INIT.	URBAN	NUMBER EMISSION RATE	BASE	RELEASE	INIT.
SOURCE	SCALAR	EMISSION RATE (GRAMS/SEC)	ELEV.	HEIGHT	SY
SZ	ID	CATS.	(METERS)	(METERS)	(METERS)
(METERS)	BY				

L0000380	0	0.25230E-07	482090.3	3733411.8	433.0	3.49	4.00	
3.25 YES	L0000381	0	0.25230E-07	482090.2	3733403.2	433.0	3.49	4.00
3.25 YES	L0000382	0	0.25230E-07	482090.1	3733394.7	433.0	3.49	4.00
3.25 YES	L0000383	0	0.25230E-07	482090.0	3733386.1	433.0	3.49	4.00
3.25 YES	L0000384	0	0.25230E-07	482090.0	3733377.5	433.0	3.49	4.00
3.25 YES	L0000385	0	0.25230E-07	482089.9	3733368.9	433.0	3.49	4.00
3.25 YES	L0000386	0	0.25230E-07	482089.8	3733360.3	433.0	3.49	4.00
3.25 YES	L0000387	0	0.25230E-07	482089.8	3733351.7	433.0	3.49	4.00
3.25 YES	L0000388	0	0.25230E-07	482089.7	3733343.1	433.0	3.49	4.00



3.25	YES							
L0000389		0	0.25230E-07	482089.6	3733334.5	433.0	3.49	4.00
3.25	YES							
L0000390		0	0.25230E-07	482089.5	3733325.9	433.0	3.49	4.00
3.25	YES							
L0000391		0	0.25230E-07	482089.5	3733317.3	433.0	3.49	4.00
3.25	YES							
L0000392		0	0.25230E-07	482089.4	3733308.8	433.0	3.49	4.00
3.25	YES							
L0000393		0	0.25230E-07	482089.3	3733300.2	433.0	3.49	4.00
3.25	YES							
L0000394		0	0.25230E-07	482089.2	3733291.6	433.0	3.49	4.00

```

3.25      YES
^ *** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\14775
Ethanac and Barnett\14775 ***          05/22/23
*** AERMET - VERSION 16216 ***      ***
***                                     13:15:37

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\*\*\* MODELOPTs:      RegDFault    CONC    ELEV    URBAN    ADJ\_U\*      PAGE    8

\*\*\* SOURCE IDs DEFINING SOURCE GROUPS

\*\*\*

SRCGROUP ID		SOURCE IDs	
-----		-----	
ALL	L0000220 , L0000221 , L0000222 , L0000223 , L0000224 ,		
L0000225	, L0000226 , L0000227 ,		
	L0000228 , L0000229 , L0000230 , L0000231 , L0000232 ,		
L0000233	, L0000234 , L0000235 ,		
	L0000236 , L0000237 , L0000238 , L0000239 , L0000240 ,		
L0000241	, L0000242 , L0000243 ,		
	L0000244 , L0000245 , L0000246 , L0000247 , L0000248 ,		
L0000249	, L0000250 , L0000251 ,		
	L0000252 , L0000253 , L0000254 , L0000255 , L0000256 ,		
L0000257	, L0000258 , L0000259 ,		
	L0000260 , L0000261 , L0000262 , L0000263 , L0000264 ,		
L0000265	, L0000266 , L0000267 ,		
	L0000268 , L0000269 , L0000270 , L0000271 , L0000272 ,		
L0000273	, L0000274 , L0000275 ,		



L0000281	L0000276 , L0000282	L0000277 , L0000283	L0000278 ,	L0000279	L0000280 ,
L0000289	L0000284 , L0000290	L0000285 , L0000291	L0000286 ,	L0000287	L0000288 ,
L0000297	L0000292 , L0000298	L0000293 , L0000299	L0000294 ,	L0000295	L0000296 ,
L0000305	L0000300 , L0000306	L0000301 , L0000307	L0000302 ,	L0000303	L0000304 ,
L0000313	L0000308 , L0000314	L0000309 , L0000315	L0000310 ,	L0000311	L0000312 ,
L0000321	L0000316 , L0000322	L0000317 , L0000323	L0000318 ,	L0000319	L0000320 ,
L0000329	L0000324 , L0000330	L0000325 , L0000331	L0000326 ,	L0000327	L0000328 ,
L0000337	L0000332 , L0000338	L0000333 , L0000339	L0000334 ,	L0000335	L0000336 ,
L0000345	L0000340 , L0000346	L0000341 , L0000347	L0000342 ,	L0000343	L0000344 ,
L0000353	L0000348 , L0000354	L0000349 , L0000355	L0000350 ,	L0000351	L0000352 ,
L0000361	L0000356 , L0000362	L0000357 , L0000363	L0000358 ,	L0000359	L0000360 ,
L0000369	L0000364 , L0000370	L0000365 , L0000371	L0000366 ,	L0000367	L0000368 ,
L0000377	L0000372 , L0000378	L0000373 , L0000379	L0000374 ,	L0000375	L0000376 ,

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\*\*\* SOURCE IDs DEFINING SOURCE GROUPS

\*\*\*



SRCGROUP ID  
-----

SOURCE IDs  
-----

L0000385      L0000380      , L0000381      , L0000382      , L0000383      , L0000384      ,  
                 , L0000386      , L0000387      ,  
  
L0000393      L0000388      , L0000389      , L0000390      , L0000391      , L0000392      ,  
                 , L0000394      , STCK1      ,

STCK2      ,

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\*\*\* MODELOPTs:      RegDFault      CONC      ELEV      URBAN      ADJ\_U\*

\*\*\* SOURCE IDs DEFINED AS URBAN SOURCES

\*\*\*

URBAN ID      URBAN POP  
-----

SOURCE IDs  
-----

L0000224      2189641.      L0000220      , L0000221      , L0000222      , L0000223      ,  
                 , L0000225      , L0000226      ,  
L0000227      ,  
  
L0000233      L0000228      , L0000229      , L0000230      , L0000231      , L0000232      ,  
                 , L0000234      , L0000235      ,  
  
L0000241      L0000236      , L0000237      , L0000238      , L0000239      , L0000240      ,  
                 , L0000242      , L0000243      ,  
  
L0000249      L0000244      , L0000245      , L0000246      , L0000247      , L0000248      ,  
                 , L0000250      , L0000251      ,  
  
L0000257      L0000252      , L0000253      , L0000254      , L0000255      , L0000256      ,  
                 , L0000258      , L0000259      ,  
  
L0000265      L0000260      , L0000261      , L0000262      , L0000263      , L0000264      ,  
                 , L0000266      , L0000267      ,  
  
L0000273      L0000268      , L0000269      , L0000270      , L0000271      , L0000272      ,  
                 , L0000274      , L0000275      ,  
  
                 L0000276      , L0000277      , L0000278      , L0000279      , L0000280      ,



L0000281 , L0000282 , L0000283 ,  
 L0000289 , L0000284 , L0000285 , L0000286 , L0000287 , L0000288 ,  
 , L0000290 , L0000291 ,  
 L0000297 , L0000292 , L0000293 , L0000294 , L0000295 , L0000296 ,  
 , L0000298 , L0000299 ,  
 L0000305 , L0000300 , L0000301 , L0000302 , L0000303 , L0000304 ,  
 , L0000306 , L0000307 ,  
 L0000313 , L0000308 , L0000309 , L0000310 , L0000311 , L0000312 ,  
 , L0000314 , L0000315 ,  
 L0000321 , L0000316 , L0000317 , L0000318 , L0000319 , L0000320 ,  
 , L0000322 , L0000323 ,  
 L0000329 , L0000324 , L0000325 , L0000326 , L0000327 , L0000328 ,  
 , L0000330 , L0000331 ,  
 L0000337 , L0000332 , L0000333 , L0000334 , L0000335 , L0000336 ,  
 , L0000338 , L0000339 ,  
 L0000345 , L0000340 , L0000341 , L0000342 , L0000343 , L0000344 ,  
 , L0000346 , L0000347 ,  
 L0000353 , L0000348 , L0000349 , L0000350 , L0000351 , L0000352 ,  
 , L0000354 , L0000355 ,  
 L0000361 , L0000356 , L0000357 , L0000358 , L0000359 , L0000360 ,  
 , L0000362 , L0000363 ,  
 L0000369 , L0000364 , L0000365 , L0000366 , L0000367 , L0000368 ,  
 , L0000370 , L0000371 ,  
 L0000377 , L0000372 , L0000373 , L0000374 , L0000375 , L0000376 ,  
 , L0000378 , L0000379 ,

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\*\*\* SOURCE IDs DEFINED AS URBAN SOURCES

\*\*\*

URBAN ID URBAN POP

SOURCE IDs



```

-----
L0000380      , L0000381      , L0000382      , L0000383      , L0000384      ,
L0000385      , L0000386      , L0000387      ,
L0000388      , L0000389      , L0000390      , L0000391      , L0000392      ,
L0000393      , L0000394      , STCK1      ,

```

```

STCK2      ,
^ *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14775
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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
OF WEEK (HRDOW7) \*

```

SOURCE ID = STCK1      ; SOURCE TYPE = POINT      :
  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR
  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR

```

```

-----
DAY OF WEEK = MONDAY
  1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00
6 .0000E+00  7 .0000E+00  8 .0000E+00
  9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

```

```

DAY OF WEEK = TUESDAY
  1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00
6 .0000E+00  7 .0000E+00  8 .0000E+00
  9 .0000E+00 10 .1000E+01 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

```

```

DAY OF WEEK = WEDNESDY
  1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00
6 .0000E+00  7 .0000E+00  8 .0000E+00
  9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

```

```

DAY OF WEEK = THURSDAY
  1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00
6 .0000E+00  7 .0000E+00  8 .0000E+00

```



9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
 14 .0000E+00 15 .0000E+00 16 .0000E+00  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = FRIDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
 14 .0000E+00 15 .0000E+00 16 .0000E+00  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
 14 .0000E+00 15 .0000E+00 16 .0000E+00  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
 14 .0000E+00 15 .0000E+00 16 .0000E+00  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00

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 Ethanac and Barnett\14775 \*\*\* 05/22/23  
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 \*\*\* 13:15:37

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY  
 OF WEEK (HRDOW7) \*

SOURCE ID = STCK2 ; SOURCE TYPE = POINT :  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR  
 HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - - -  
 - - - - -

DAY OF WEEK = MONDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00  
 6 .0000E+00 7 .0000E+00 8 .0000E+00  
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00  
 14 .0000E+00 15 .0000E+00 16 .0000E+00  
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00  
 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = TUESDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00



		DAY OF WEEK = WEDNESDY								
	1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00					
	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00					
	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00					

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	
6	.0000E+00	7	.0000E+00	8	.0000E+00					
	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00					
	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00					

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	
6	.0000E+00	7	.0000E+00	8	.0000E+00					
	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00					
	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00					

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	
6	.0000E+00	7	.0000E+00	8	.0000E+00					
	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00					
	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00					

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	
6	.0000E+00	7	.0000E+00	8	.0000E+00					
	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00					
	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00					

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	
6	.0000E+00	7	.0000E+00	8	.0000E+00					
	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00					
	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00					

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*** AERMET - VERSION 16216 ***
***
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*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)

```



(METERS)

( 481674.7, 3733528.2, 432.6, 432.6, 0.0);	( 481678.5,
3733485.2, 433.0, 433.0, 0.0);	
( 482332.4, 3733529.2, 434.0, 434.0, 0.0);	( 482072.7,
3733713.3, 433.0, 433.0, 0.0);	
( 482216.7, 3733719.2, 433.0, 433.0, 0.0);	( 481358.9,
3733604.3, 432.0, 432.0, 0.0);	
( 481263.4, 3733447.0, 432.0, 432.0, 0.0);	( 481263.1,
3733556.7, 431.8, 431.8, 0.0);	
( 481632.2, 3732857.9, 433.0, 433.0, 0.0);	( 482685.2,
3732853.1, 435.0, 435.0, 0.0);	
( 482130.0, 3732676.5, 435.0, 435.0, 0.0);	( 482403.3,
3732672.4, 435.8, 435.8, 0.0);	
( 481674.8, 3732799.4, 433.0, 433.0, 0.0);	( 482838.5,
3733632.3, 435.0, 435.0, 0.0);	
( 483293.6, 3733685.7, 436.0, 436.0, 0.0);	( 483197.2,
3731112.9, 441.2, 651.0, 0.0);	
( 483154.3, 3731089.9, 441.0, 651.0, 0.0);	( 484158.5,
3733886.5, 441.5, 441.5, 0.0);	
( 484127.2, 3733944.4, 441.2, 441.2, 0.0);	( 480863.5,
3734010.1, 430.0, 430.0, 0.0);	
( 481969.2, 3732847.3, 434.0, 434.0, 0.0);	( 481994.9,
3733761.9, 433.0, 433.0, 0.0);	
( 481484.8, 3733176.0, 433.0, 433.0, 0.0);	( 481572.2,
3733752.1, 432.0, 432.0, 0.0);	
( 481862.6, 3733698.6, 433.0, 433.0, 0.0);	

```

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Ethanac and Barnett\14775 ***      05/22/23
*** AERMET - VERSION 16216 ***      ***
***                                  ***
***                                  13:15:37

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\*\*\* MODELOPTs: RegDFault CONC ELEV URBAN ADJ\_U\*

\*\*\* METEOROLOGICAL DAYS SELECTED FOR

PROCESSING \*\*\*

(1=YES; 0=NO)

[illegible]



```

      1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
      1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
      1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

\*\*\* UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES \*\*\*  
(METERS/SEC)

1.54, 3.09, 5.14, 8.23,  
10.80,

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\*\*\* MODELOPTs: RegDFault CONC ELEV URBAN ADJ\_U\*

\*\*\* UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA \*\*\*

Surface file: PERI\_V9\_ADJU\PERI\_v9.SFC  
Met Version: 16216  
Profile file: PERI\_V9\_ADJU\PERI\_v9.PFL

Surface format: FREE

Profile format: FREE

Surface station no.: 3171 Upper air station no.: 3190  
Name: UNKNOWN Name: UNKNOWN  
Year: 2010 Year: 2010

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	Z0	BOWEN
ALBEDO	REF	WS	WD	HT	REF	TA	HT							
10	01	01	1	01	-7.9	0.125	-9.000	-9.000	-999.	106.	21.2	0.19	0.61	
1.00	1.30	335.			9.1	282.5	5.5							
10	01	01	1	02	-3.9	0.088	-9.000	-9.000	-999.	62.	15.1	0.19	0.61	
1.00	0.90	142.			9.1	280.9	5.5							



10	01	01	1	03	-3.9	0.088	-9.000	-9.000	-999.	62.	15.1	0.19	0.61
1.00		0.90	324.		9.1	280.4	5.5						
10	01	01	1	04	-1.3	0.064	-9.000	-9.000	-999.	39.	18.3	0.19	0.61
1.00		0.40	294.		9.1	278.8	5.5						
10	01	01	1	05	-3.9	0.088	-9.000	-9.000	-999.	62.	15.0	0.19	0.61
1.00		0.90	205.		9.1	278.1	5.5						
10	01	01	1	06	-1.3	0.065	-9.000	-9.000	-999.	39.	18.3	0.19	0.61
1.00		0.40	3.		9.1	277.0	5.5						
10	01	01	1	07	-8.0	0.125	-9.000	-9.000	-999.	106.	21.0	0.19	0.61
1.00		1.30	99.		9.1	277.0	5.5						
10	01	01	1	08	-3.3	0.086	-9.000	-9.000	-999.	61.	16.8	0.19	0.61
0.54		0.90	319.		9.1	278.8	5.5						
10	01	01	1	09	20.1	0.128	0.307	0.010	49.	110.	-9.0	0.19	0.61
0.33		0.90	239.		9.1	284.2	5.5						
10	01	01	1	10	56.7	0.087	0.560	0.010	107.	62.	-1.0	0.19	0.61
0.26		0.40	188.		9.1	289.2	5.5						
10	01	01	1	11	81.5	0.323	0.867	0.008	277.	441.	-35.9	0.19	0.61
0.23		2.70	310.		9.1	290.9	5.5						
10	01	01	1	12	97.1	0.281	1.058	0.008	421.	357.	-19.7	0.19	0.61
0.22		2.20	357.		9.1	293.1	5.5						
10	01	01	1	13	92.2	0.279	1.117	0.008	523.	354.	-20.4	0.19	0.61
0.22		2.20	356.		9.1	293.8	5.5						
10	01	01	1	14	77.6	0.275	1.102	0.008	595.	347.	-23.2	0.19	0.61
0.23		2.20	50.		9.1	294.2	5.5						
10	01	01	1	15	54.9	0.230	1.006	0.008	640.	266.	-19.2	0.19	0.61
0.27		1.80	53.		9.1	293.8	5.5						
10	01	01	1	16	12.3	0.206	0.613	0.008	648.	225.	-61.5	0.19	0.61
0.36		1.80	11.		9.1	292.5	5.5						
10	01	01	1	17	-3.6	0.087	-9.000	-9.000	-999.	71.	15.6	0.19	0.61
0.64		0.90	351.		9.1	290.4	5.5						
10	01	01	1	18	-3.8	0.087	-9.000	-9.000	-999.	62.	15.2	0.19	0.61
1.00		0.90	186.		9.1	287.5	5.5						
10	01	01	1	19	-3.8	0.087	-9.000	-9.000	-999.	62.	15.2	0.19	0.61
1.00		0.90	275.		9.1	285.9	5.5						
10	01	01	1	20	-1.2	0.064	-9.000	-9.000	-999.	39.	18.1	0.19	0.61
1.00		0.40	181.		9.1	285.4	5.5						
10	01	01	1	21	-7.8	0.125	-9.000	-9.000	-999.	106.	21.3	0.19	0.61
1.00		1.30	318.		9.1	284.9	5.5						
10	01	01	1	22	-3.8	0.088	-9.000	-9.000	-999.	62.	15.1	0.19	0.61
1.00		0.90	196.		9.1	283.1	5.5						
10	01	01	1	23	-3.8	0.088	-9.000	-9.000	-999.	62.	15.1	0.19	0.61
1.00		0.90	330.		9.1	281.4	5.5						
10	01	01	1	24	-7.9	0.125	-9.000	-9.000	-999.	106.	21.2	0.19	0.61
1.00		1.30	332.		9.1	280.9	5.5						

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
10	01	01	01	5.5	0	-999.	-99.00	282.6	99.0	-99.00	-99.00
10	01	01	01	9.1	1	335.	1.30	-999.0	99.0	-99.00	-99.00



F indicates top of profile (=1) or below (=0)

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ\_U\*

\*\*\* THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5  
YEARS FOR SOURCE GROUP: ALL \*\*\*

INCLUDING SOURCE(S): L0000220 , L0000221  
, L0000222 , L0000223 , L0000224 ,  
L0000225 , L0000226 , L0000227 , L0000228 , L0000229  
, L0000230 , L0000231 , L0000232 ,  
L0000233 , L0000234 , L0000235 , L0000236 , L0000237  
, L0000238 , L0000239 , L0000240 ,  
L0000241 , L0000242 , L0000243 , L0000244 , L0000245  
, L0000246 , L0000247 , . . . ,

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS

\*\*\*

\*\* CONC OF DPM IN MICROGRAMS/M\*\*3

\*\*

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)
Y-COORD (M)	CONC		
481674.68	3733528.18	0.00048	481678.55
3733485.20	0.00052		
482332.42	3733529.19	0.00054	482072.67
3733713.28	0.00096		
482216.68	3733719.21	0.00090	481358.93
3733604.26	0.00015		
481263.43	3733447.05	0.00013	481263.12
3733556.71	0.00013		
481632.16	3732857.88	0.00016	482685.25
3732853.15	0.00010		
482129.97	3732676.48	0.00015	482403.26
3732672.44	0.00012		
481674.81	3732799.36	0.00015	482838.46
3733632.31	0.00012		
483293.65	3733685.67	0.00005	483197.16
3731112.95	0.00003		
483154.33	3731089.88	0.00003	484158.53
3733886.47	0.00002		
484127.24	3733944.44	0.00002	480863.49



3734010.10	0.00005		
481969.25	3732847.29	0.00023	481994.88
3733761.91	0.00063		
481484.76	3733176.04	0.00020	481572.25
3733752.15	0.00022		
481862.57	3733698.63	0.00066	

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\*\*\* MODELOPTs:      RegDFAULT    CONC    ELEV    URBAN    ADJ\_U\*

\*\*\* THE SUMMARY OF MAXIMUM ANNUAL RESULTS

AVERAGED OVER    5 YEARS \*\*\*

\*\* CONC OF DPM            IN MICROGRAMS/M\*\*3

\*\*

GROUP ID		NETWORK	AVERAGE CONC	RECEPTOR (XR, YR,
ZELEV, ZHILL, ZFLAG)		OF TYPE	GRID-ID	
-----				
ALL	1ST HIGHEST VALUE IS		0.00096 AT (	482072.67, 3733713.28,
433.00,	433.00, 0.00) DC			
	2ND HIGHEST VALUE IS		0.00090 AT (	482216.68, 3733719.21,
433.00,	433.00, 0.00) DC			
	3RD HIGHEST VALUE IS		0.00066 AT (	481862.57, 3733698.63,
433.00,	433.00, 0.00) DC			
	4TH HIGHEST VALUE IS		0.00063 AT (	481994.88, 3733761.91,
433.00,	433.00, 0.00) DC			
	5TH HIGHEST VALUE IS		0.00054 AT (	482332.42, 3733529.19,
434.00,	434.00, 0.00) DC			
	6TH HIGHEST VALUE IS		0.00052 AT (	481678.55, 3733485.20,
433.00,	433.00, 0.00) DC			
	7TH HIGHEST VALUE IS		0.00048 AT (	481674.68, 3733528.18,
432.59,	432.59, 0.00) DC			
	8TH HIGHEST VALUE IS		0.00023 AT (	481969.25, 3732847.29,
434.00,	434.00, 0.00) DC			
	9TH HIGHEST VALUE IS		0.00022 AT (	481572.25, 3733752.15,
432.00,	432.00, 0.00) DC			
	10TH HIGHEST VALUE IS		0.00020 AT (	481484.76, 3733176.04,
433.00,	433.00, 0.00) DC			



\*\*\* RECEPTOR TYPES: GC = GRIDCART  
GP = GRIDPOLR  
DC = DISCCART  
DP = DISCPOLR

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\*\*\* MODELOPTs: RegDFault CONC ELEV URBAN ADJ\_U\*

\*\*\* Message Summary : AERMOD Model Execution \*\*\*

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)  
A Total of 6 Warning Message(s)  
A Total of 2028 Informational Message(s)  
  
A Total of 43824 Hours Were Processed  
  
A Total of 978 Calm Hours Identified  
  
A Total of 1050 Missing Hours Identified ( 2.40 Percent)

\*\*\*\*\* FATAL ERROR MESSAGES \*\*\*\*\*  
\*\*\* NONE \*\*\*

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*  
SO W320 532 PPARM: Input Parameter May Be Out-of-Range for Parameter  
VS  
SO W320 533 PPARM: Input Parameter May Be Out-of-Range for Parameter  
VS  
ME W186 604 MEOPEN: THRESH\_1MIN 1-min ASOS wind speed threshold used  
0.50  
ME W187 604 MEOPEN: ADJ\_U\* Option for Stable Low Winds used in AERMET  
  
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at:  
14010101  
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at:  
2 year gap

\*\*\*\*\*  
\*\*\* AERMOD Finishes Successfully \*\*\*  
\*\*\*\*\*



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# Attachment C: Preparer Resumes



## Konstanza Dobрева, JD

### Director of Environmental Planning

#### EDUCATION

Juris Doctor  
Pepperdine University  
School of Law

Bachelor of Arts, *cum laude*, Environmental  
Analysis & Design,  
Minor in Urban &  
Regional Planning  
University of California,  
Irvine

Certificate in  
Alternative Dispute  
Resolution  
Straus Institute

#### PROFESSIONAL AFFILIATIONS

Board of Directors,  
Orange County  
Association of  
Environmental  
Professionals

Co-chair, Association  
of Environmental  
Professionals State  
Conference  
(2005 and 2014)

#### PROFILE

Konnie's more than 17 years of public and private sector planning and legal experience have made her an expert in entitlements, environmental and policy planning, a keen analyst and an effective writer of environmental documents. She has managed and prepared environmental documents for a diverse range of projects and clients: small-scale residential and large planned communities, commercial office, industrial, mixed-use, and schools. In law school, Konnie specialized in alternative dispute resolution. She clerked for two private law firms and the Thousand Oaks City Attorney's Office. She was also a full-time extern for the Honorable Warren J. Ferguson, 9th Circuit Court of Appeals. Konnie has been a planner with the City of Lake Forest and a planning consultant for the cities of Irvine, Anaheim, and Rancho Santa Margarita. Her duties included project management, evaluating development proposals, presenting staff reports and resolutions before the Zoning Administrator and Planning Commission, evaluating grading and building plans, and environmental review and documentation. Konnie's diverse planning and legal experience provides her with a unique understanding of planning and zoning law, and the California Environmental Quality Act (CEQA). She is frequent lecturer on CEQA for the Association of Environmental Professionals (AEP) Advanced CEQA Workshop and CEQA Basics Workshop, which provides training to many of the area developers, agency planners and attorneys.

#### REPRESENTATIVE PROJECTS

RIDER COMMERCE CENTER	Mitigated Negative Declaration, coordination of technical studies; community outreach; post- entitlement permitting and management of design disciplines.	SADDLEBACK STADIUM CEQA 8,000-seat stadium at Saddleback College, City of Mission Viejo. Environmental - Addendum to EIR
200,000 SF industrial building on 9.6 acres, Riverside County. Entitlement - Major Plot Plan; environmental -		



## REPRESENTATIVE PROJECTS

previously prepared by EPD staff, coordination of technical studies. Coordination of post-entitlement mitigation compliance, including cultural, paleontological, and biological surveying and monitoring. EPD prepared a traffic study for the project.

### TWELVE OAKS WINERY RESORT

286-key winery resort and 96-lot residential subdivision on 1,100 acres, Riverside County. Entitlement - Conditional Use Permit, Tentative Tract Map; environmental - Mitigated Negative Declaration, coordination of technical studies.

### LOS OLIVOS

48 homes on a 12.6-acre site, Riverside County. Entitlement - Tentative Tract Map; environmental - Mitigated Negative Declaration. EPD processed Airport Land Use Commission review and approval of the project, and also coordinated review by the County's Environmental Programs Division as part of the required Habitat Assessment and Negotiation Strategy (HANS) in compliance with

Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).

### DOWNTOWN COMMERCIAL CORE SPECIFIC PLAN

EPD prepared a Specific Plan with detailed Design Guidelines and a Program EIR to accommodate the addition of 887 residential units and 300,000 square feet of commercial space to Old Town Tustin, with attendant development standards and public realm improvements. EPD prepared a Program EIR for the Specific Plan, including the coordination of technical studies.

### 901 E. SOUTH STREET

546 homes on a 20.6-acre site, City of Anaheim. EPD prepared an Infill Environmental Checklist (CEQA Guidelines Appendix N) to comply with CEQA requirements for this project, which included the demolition of 340,000 SF of industrial buildings and replacement with a medium- to high-density residential community. To support use of this checklist, EPD included an analysis of the project's compliance with the Performance Standards

contained in Appendix M of the CEQA Guidelines.

### COLONY COMMERCE CENTER EAST

1.9 million SF of industrial buildings on 94 acres, City of Ontario. EPD prepared an EIR for a Specific Plan and other entitlements, and coordinated various technical studies. Important areas of assessment included historic resources, health risks and residential adjacencies, tribal cultural resources, and biological resources.

### CLAREMONT GENERAL PLAN HOUSING ELEMENT EIR ADDENDUM

EPD was selected to prepare an EIR addendum for the City of Claremont's General Plan Housing Element update. The addendum provides a detailed analysis of two potential residential development sites in order to minimize future analysis requirements for affordable housing development on those sites. EPD's role required close coordination with the City Attorney and detailed analysis of traffic impacts.



## REPRESENTATIVE PROJECTS

### CHINO FRANCIS ESTATES

43 single-family homes on 13.3 acres, City of Chino. Entitlement - General Plan Amendment, pre-zoning and annexation to City of Chino, Tentative Tract Map, Site Approval, Special Conditional Use Permit; environmental - Mitigated Negative Declaration, coordination of technical studies. EPD prepared a traffic study for the project.

### BRODIAEA BUSINESS CENTER

100,000 SF industrial building on 6.7 acres, City of Moreno Valley. Entitlement - Plot Plan, Variance; environmental - Addendum to Mitigated Negative Declaration, coordination of technical studies; post-entitlement permitting and management of design disciplines.

### HARVILL INDUSTRIAL CENTER

424,000 SF industrial building on 21.3 acres, Riverside County. Entitlement - Major Plot Plan; environmental - Mitigated Negative Declaration, coordination of technical studies.

### SIMON RANCH RESERVOIR

Demolition of 1.4-million-gallon

underground reservoir and replacement with 1-million-gallon aboveground reservoir. EPD prepared a Mitigated Negative Declaration for the project and conducted multiple community meetings and outreach with stakeholders. Outreach meetings led to design alternations to satisfy community concerns and obtain support, resulting in virtually no opposing comments at the City Council hearing.

### VILLAGE 605

114,000 SF commercial center on 9.6 acres, City of Los Alamitos. EPD prepared an EIR Addendum to evaluate this major redevelopment project located adjacent to a residential community, Los Alamitos City Hall, and the I-605 freeway. The analysis included an aesthetics and lighting assessment of the project's 120-foot-tall digital identification sign.

### HAMPTON INN CLAREMONT SPECIFIC PLAN

EPD prepared a Specific Plan for the redevelopment of existing commercial uses with a 121-key, four-story hotel on a 4-acre site.

### MONTEBELLO TOWNHOMES

80 condos on a 3.7-acre site, City of Montebello. Entitlement - Tentative Tract Map, Planned Development District; environmental - detailed environmental checklist in support of Class 32 Infill Development categorical exemption.

### VINTAGE LOFTS

140 condos on 6.8 acres within historic Old Town, City of Tustin. Entitlement - General Plan Amendment, Zone Change, Tentative Tract Map, Design Review, Development Agreement; environmental - Mitigated Negative Declaration, coordination of technical studies. Ms. Macias prepared a traffic study for the project while at a prior employer.

### METROPOLITAN STATE

HOSPITAL MODERNIZATION Modernization projects to allow an increased bed capacity at the facility for the mentally ill. EPD prepared a Mitigated Negative Declaration and a traffic study for the project.

### CARDINAL GLASS EXPANSION

50,000 SF manufacturing



## REPRESENTATIVE PROJECTS

facility expansion on 6.4 acres, City of Moreno Valley. EPD prepared an Addendum to a Negative Declaration for the project.	PEDLEY CROSSINGS 300,000 SF commercial center on 30 acres, City of Jurupa Valley. EPD prepared an Environmental Impact Report for the project, including analysis of blasting of rock on the site and the export of 1.8 million cubic yards of material. The EIR also contained detailed analyses for vibration, noise, traffic, and cultural resources impacts.	also coordinated extensively with Southern California Edison and the City's public works department to underground utility lines fronting the project.
CITY LANE TOWNHOMES 60 condos on a 2.9-acre site, City of Mission Viejo. Entitlement - General Plan Amendment, Zone Change, Development Code Amendment; environmental - Addendum to Mitigated Negative Declaration, coordination of technical studies.	CAMEO 91 single-family homes on 13.9 acres, Los Angeles County (East La Mirada). Entitlement - Zone Change, Vesting Tentative Tract Map, Conditional Use Permit; environmental - Mitigated Negative Declaration.	
CALTRANS FONTANA SOLAR PHOTOVOLTAIC PROJECT 1.241-MW solar power plant on 7.8 acres owned by Caltrans, City of Fontana. EPD prepared a Mitigated Negative Declaration. The project approval was processed through the California Department of General Services.	HEMET SOLAR 20-MW solar power plant on 105 acres, City of Hemet. Entitlement - Conditional Use Permit; environmental - Mitigated Negative Declaration, coordination of technical studies. Due to the site's location below the runway approach to Hemet Airport, EPD completed a Federal Aviation Administration Obstruction Evaluation and obtained Airport Land Use Commission approval. EPD	
PIPELINE AVENUE RESIDENTIAL 36 homes on 6.9 acres, San Bernardino County (Chino Sphere of Influence). EPD prepared a Mitigated Negative Declaration and coordinated technical studies.		



## Meghan Macias, TE

### Transportation Planning Director

#### EDUCATION

Master of Urban and  
Regional Planning  
*University of California,  
Irvine*

Bachelor of Arts in  
Geography  
*California State  
University, Fullerton*

#### PROFESSIONAL AFFILIATIONS

Treasurer, Orange  
County Association  
of Environmental  
Professionals

Institute of Transportation  
Engineers (ITE)  
Member of San Diego  
Section SB743 Subcommittee

Orange County Traffic  
Engineering Council  
(OCTEC)

#### CERTIFICATIONS

California Traffic  
Engineer 2697

#### PROFILE

Meghan's primary responsibilities include preparation of technical analyses of land development projects, including comprehensive transportation impact analyses, traffic operations analyses, and parking studies. Meghan has worked on numerous and varied projects through California including land development, infrastructure, active transportation and Master/ Specific/ General Plans. Meghan has a proven track record of managing complicated and controversial projects to achieve defensible and implementable solutions to technical issues. Her expertise in traffic engineering and operations analysis methodologies is complemented by her knowledge of the California Environmental Quality Act (CEQA).

#### TRANSPORTATION PLANNING EXPERTISE

Meghan has over 20 years of experience in the transportation planning field and has worked on hundreds of projects throughout California. She has a deep understanding of the regulations and methodologies used by local and regional agencies including application of local traffic study guidelines, CMP, CEQA requirements, Mitigation Fee Act, SB743, and the implementation of VMT analyses. Meghan uses her experience to provide strategic transportation planning services to public- and private- sector clients. Her work is focused on providing implementable solutions that satisfy various stakeholders including developers, local agencies, and affected citizens.

#### REPRESENTATIVE PROJECTS

- *The Bowery, City of Santa Ana, 1,150 DU and 80,000 sf retail/ restaurant*
- *Bloomington Business Park, San Bernardino County, Approx 2 Million sf Industrial*
- *Pioneer Boulevard Business Park, City of Santa Fe Springs, 163,518 sf Industrial*
- *Alta Vista Specific Plan Amendment, 54 DU and 10,500 sf restaurant, City of Placentia*
- *Saddleback Stadium EIR Addendum, City of Mission Viejo, 8,000-seat stadium*
- *LaVerne Elementary Prep Academy, City of Hesperia, charter school*
- *Gemini Solar Project, Clark County, NV, 690-MW solar power plant*
- *City of Redlands VMT Screening Thresholds*
- *Chino Francis Estates, City of Chino, 43 homes*
- *Vintage Lofts, City of Tustin, 140 condos*
- *Highway 46 Logistics Center, Kern County, 2 million SF industrial*
- *Metropolitan State Hospital Modernization, City of Norwalk, state hospital*



## Danielle Thayer

### Associate Environmental Planner

#### EDUCATION

Masters of Science,  
Natural Resources &  
Environmental Sciences  
University of Illinois,  
Champaign

Bachelors of Arts,  
Urban & Regional  
Planning  
University of Illinois,  
Champaign

#### PROFESSIONAL AFFILIATIONS

Association of  
Environmental  
Professionals

#### PROFILE

Danielle has over 6 years of experience practicing environmental planning and policy analysis. Professional experience includes preparation of environmental assessment documents and technical studies, in compliance with CEQA and NEPA. Ms. Thayer has provided her technical expertise on a wide variety of transportation, utility, and development projects for both public and private sector clients. Her educational background is in urban planning, stormwater management, and environmental law and economics.

#### REPRESENTATIVE PROJECTS

- *6th Cycle Housing Element, City of Norco*
- *6th Cycle Housing Element, City of Norco*
- *Wood & Lurin Initial Study/MND, County of Riverside*
- *Sanderson Ranch Initial Study/MND, City of San Jacinto*
- *Rancho De Alamo Initial Study/MND, City of San Jacinto*
- *Valley & Whitney Initial Study/MND, City of Moreno Valley*
- *Bradbury Road Widening Initial Study/MND, City of Bradbury*
- *5770 Industrial Parkway Initial Study/MND, County of San Bernardino*
- *6th Cycle Housing Element Initial Study/MND, City of Norco*
- *6th Cycle Housing Element Initial Study/MND, City of Norco*
- *9930 Pioneer Blvd Addendum, City of Santa Fe Springs*





# HASEEB QURESHI, MES

SENIOR ASSOCIATE, URBAN CROSSROADS, INC.  
hqureshi@urbanxroads.com

## BACKGROUND

Haseeb Qureshi has been working in the field of air quality, climate change, health risk assessment, and vehicular and non-motorized transportation planning and analysis since 2006. In this time he has authored numerous air quality, health risk, greenhouse gas, traffic impact analysis studies, and provided input into project design to promote sustainability and walkability for projects ranging from small development projects to citywide General Plan updates and large scale specific plans. Recent activities include efforts to inventory greenhouse gas emissions for various projects and provide recommendations to reduce carbon impacts through innovative mitigation strategies. Mr. Qureshi earned his Master of Science degree in Environmental Studies from California State University, Fullerton and his Bachelor of Arts degree in Environmental Analysis & Design from University of California, Irvine. Mr. Qureshi is also proficient in the use of unique software tools such as CalEEMod, AERMOD, ISCST3, CALINE4 and EMFAC.

## EDUCATION

### M.S. - Environmental Studies

California State University, Fullerton • May, 2010

### B.A. – Environmental Analysis and Design

University of California, Irvine • June, 2006

## AFFILIATIONS

**AEP** Association of Environmental Planners

**AWMA** Air and Waste Management Association

**ASTM** American Society for Testing and Materials

## SELECTED PROJECT EXPERIENCE

### Huntington Beach Walmart AQ, GHG, and HRA Analysis

City of Huntington Beach • July, 2011

### Shelter Island Boat Launching Facility AQ and GHG Analysis

City of San Diego • August, 2013

### March Business Center AQ, GHG, and HRA Analysis

City of Moreno Valley • October, 2011

### @ The Boulevard Development AQ and GHG Analysis

City of Hayward • August, 2013

### Rio Rancho Towne Center AQ, GHG, and HRA Analysis

City of Pomona • July, 2012

### Santee Walmart Expansion Project AQ, GHG, and HRA Analysis

City of Santee • June, 2012

### TTM No. 36391 (Ter Maaten) AQ, GHG, and HRA Analysis

City of Jurupa Valley • May, 2012

### University Crossings Apts. AQ and GHG Analysis

County of San Bernardino • March, 2012

### Saddleback/Irvine Valley College Master Plan AQ and GHG Analysis

County of Orange • August, 2013

### Watson Industrial Park AQ, GHG, and HRA Analysis

City of Chino • March, 2015

### Arcadia Logistics Center AQ, GHG, and HRA Analysis

City of Arcadia • September, 2015

### Sierra Lakes Commerce Center AQ, GHG, and HRA Analysis

City of Fontana • April, 2015

### Rancho Palma AQ, GHG, and HRA Analysis

City of San Bernardino • November, 2015

### Pomona Hyatt Place + Hyatt House AQ and GHG Analysis

City of Pomona • February, 2016

### Moreno Valley Logistics Center AQ, GHG, HRA, and Energy Analysis

City of Moreno Valley • March, 2016

### Space Center AQ, GHG, and HRA Analysis

City of Jurupa Valley • June, 2016

### Lincoln Landing AQ and GHG Analysis

City of Hayward • June, 2016

### Benton Road Residential AQ and GHG Analysis

County of Riverside • November, 2016

### El Centro Aquatic Center AQ and GHG Analysis

City of El Centro • November, 2016



# > **BILL LAWSON**, P.E., INCE

PRINCIPAL, URBAN CROSSROADS, INC.  
blawson@urbanxroads.com

## **BACKGROUND**

Bill Lawson is a founding principal partner, a Registered Professional Traffic Engineer and a Certified Acoustical Consultant. Mr. Lawson maintains a wide range of technical expertise that includes transportation planning, traffic engineering, neighborhood traffic control, and noise impact analysis. Mr. Lawson has over eighteen years of community noise experience and has personally prepared and directed the development of well over 1,500 noise study reports throughout Southern California. His work as a noise consultant focuses on helping communities identify and control noise impacts by developing meaningful solutions to complex noise issues.

## **EDUCATION**

**M.S. - Civil and Environmental Engineering**  
California Polytechnic State University, San Luis Obispo  
• 1993

**B.S. - City and Regional Planning**  
California Polytechnic State University, San Luis Obispo • 1992

## **REGISTRATIONS**

**PE** Registered Professional Traffic Engineer – TR 2537 • 2009  
**AICP** American Institute of Certified Planners – 013011 • 1997–2012  
**PTP** Professional Transportation Planner • 2007–2013  
**INCE** Institute of Noise Control Engineering • 2004

## **AFFILIATIONS**

**ASA** Acoustical Society of America  
**APA** American Planning Association  
**ITE** Institute of Transportation Engineers

## **CERTIFICATIONS**

**Certified Acoustical Consultant**  
County of Orange • February, 2011

## **SELECTED PROJECT EXPERIENCE**

**Contract City Traffic Engineer – Rancho Santa Margarita**  
July, 2010 – July, 2013

**Meredith International Centre Noise Impact Analysis**  
City of Ontario • October 2014

**Columbus Square Traffic Calming Evaluation**  
City of Tustin • September 2014

**Ramon Road Widening Noise Study Report (Caltrans)**  
Cities of Palm Springs and Cathedral City • February 2014

**General Plan Circulation Element & Traffic Study**  
City of Menifee • July 2013

**Speed Limits on Engineering and Traffic Survey (E&TS)**  
City of Rancho Santa Margarita • October 3, 2012

**Great Park Neighborhoods General Plan Amendment**  
City of Irvine • May, 2011

**San Emidio Mine Expansion Project Noise Impact Analysis**  
County of Kern • October, 2012

**Dollar General Generator Noise Analysis**  
City of San Jacinto • July, 2012

**Santee Walmart Expansion Project Noise Analysis**  
City of Santee • June, 2012

**Rancho Palma Noise Analysis**  
City of San Bernardino • December, 2015

**Pomona Hyatt Place + Hyatt House Noise Analysis**  
City of Pomona • January, 2016

**Moreno Valley Logistics Center Noise Analysis**  
City of Moreno Valley • February, 2016



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# Attachment D: TIMS Data (Traffic)

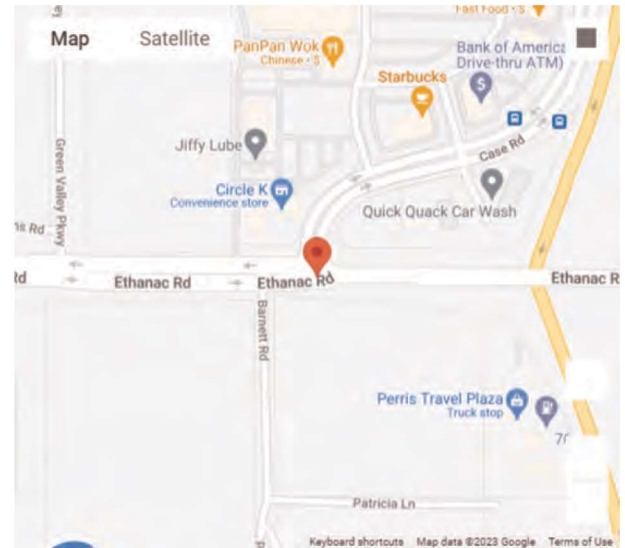


# Crash Details for: Case ID 8326169

## Crash Information

County	Riverside		
City	Perris		
Date & Time (M/D/Y)	01/27/2017 19:40		
Location (Intersection)	Ethanac Rd & Case Rd		
Dist. & Dir. from Intersection	At Intersection		
State Highway	No		
Geocoded Location	33.7429901, -117.19281		
Type of Crash	D - Broadside		
Motor Vehicle Involved With	C - Other Motor Vehicle		
Crash Severity	4 - Injury (Complaint of Pain)		
PCF Violation Category	12 - Traffic Signals and Signs		
Weather	A - Clear		
Alcohol Involved	No		
Pedestrian Accident	No	Bicycle Accident	No
Motorcycle Accident	No	Truck Accident	No

## Map View



## Street View



## Parties: 2

Party Number	Party Type	Statewide Vehicle Type	At Fault	Party Direction	Movement Preceding Collision
1	1 - Driver (including Hit and Run)	A - Passenger Car/Station Wagon	Yes	West	B - Proceeding Straight
2	1 - Driver (including Hit and Run)	A - Passenger Car/Station Wagon	No	North	E - Making Left Turn

## Victims: 6

Party Number	Victim Role	Victim Gender	Victim Age	Victim Degree of Injury
1	2 - Passenger	F - Female	26	7 - Possible Injury
1	2 - Passenger	F - Female	57	7 - Possible Injury
2	2 - Passenger	M - Male	45	0 - No Injury



Party Number	Victim Role	Victim Gender	Victim Age	Victim Degree of Injury
2	2 - Passenger	F - Female	11	0 - No Injury
2	2 - Passenger	F - Female	16	0 - No Injury
2	1 - Driver	F - Female	24	7 - Possible Injury

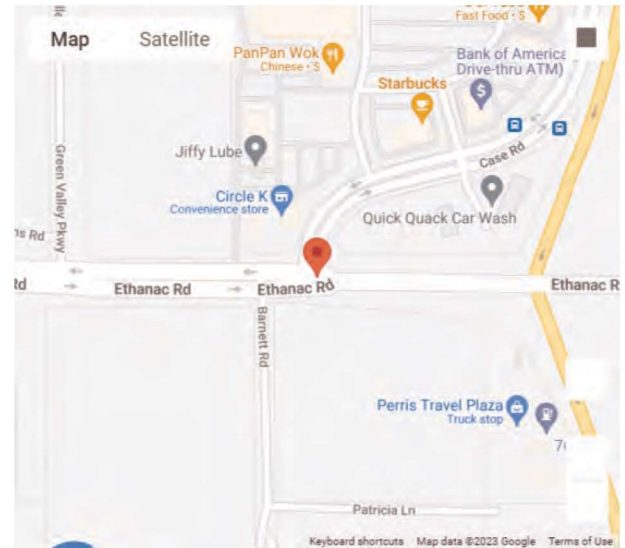


# Crash Details for: Case ID 8526534

## Crash Information

County	Riverside		
City	Perris		
Date & Time (M/D/Y)	12/01/2017 18:40		
Location (Intersection)	Case Rd & Ethanac Rd		
Dist. & Dir. from Intersection	20.00 ft North		
State Highway	No		
Geocoded Location	33.7430448, -117.1928124		
Type of Crash	C - Rear End		
Motor Vehicle Involved With	C - Other Motor Vehicle		
Crash Severity	4 - Injury (Complaint of Pain)		
PCF Violation Category	01 - Driving or Bicycling Under the Influence of Alcohol or Drug		
Weather	A - Clear		
Alcohol Involved	Yes		
Pedestrian Accident	No	Bicycle Accident	No
Motorcycle Accident	No	Truck Accident	No

## Map View



## Street View



## Parties: 2

Party Number	Party Type	Statewide Vehicle Type	At Fault	Party Direction	Movement Preceding Collision
1	1 - Driver (including Hit and Run)	D - Pickup or Panel Truck	Yes	South	B - Proceeding Straight
2	1 - Driver (including Hit and Run)	A - Passenger Car/Station Wagon	No	South	A - Stopped

## Victims: 3

Party Number	Victim Role	Victim Gender	Victim Age	Victim Degree of Injury
1	2 - Passenger	M - Male	44	0 - No Injury
2	1 - Driver	F - Female	17	7 - Possible Injury
2	2 - Passenger	M - Male	16	7 - Possible Injury

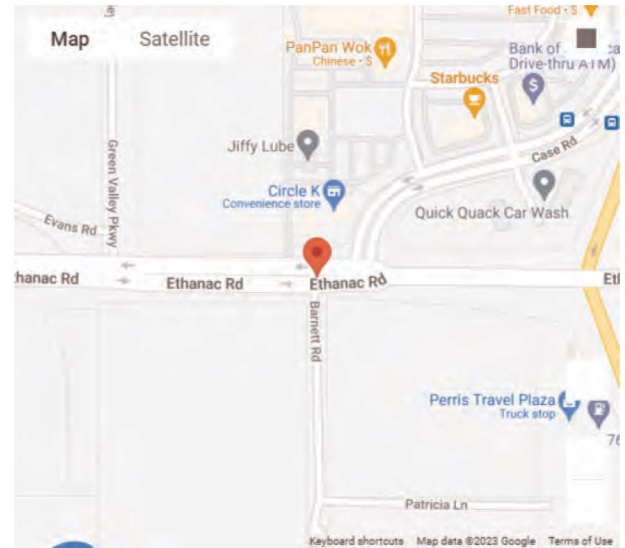


# Crash Details for: Case ID 81363555

## Crash Information

County	Riverside		
City	Menifee		
Date & Time (M/D/Y)	08/05/2020 21:35		
Location (Intersection)	Ethanac Rd & Barnett Rd		
Dist. & Dir. from Intersection	At Intersection		
State Highway Info	N/A		
Geocoded Location	33.743, -117.1933289		
Type of Crash	G - Vehicle/Pedestrian		
Motor Vehicle Involved With	B - Pedestrian		
Crash Severity	2 - Injury (Severe)		
PCF Violation Category	11 - Pedestrian Violation		
Weather	A - Clear		
Alcohol Involved	Yes		
Pedestrian Accident	Yes	Bicycle Accident	No
Motorcycle Accident	No	Truck Accident	No

## Map View



## Street View



## Parties: 2

Party Number	Party Type	Statewide Vehicle Type	At Fault	Party Direction	Movement Preceding Collision
1	2 - Pedestrian	N - Pedestrian	Yes	North	B - Proceeding Straight
2	1 - Driver (including Hit and Run)	A - Passenger Car/Station Wagon	No	East	B - Proceeding Straight

## Victims: 1

Party Number	Victim Role	Victim Gender	Victim Age	Victim Degree of Injury
1	3 - Pedestrian	M - Male	68	5 - Suspected Serious Injury

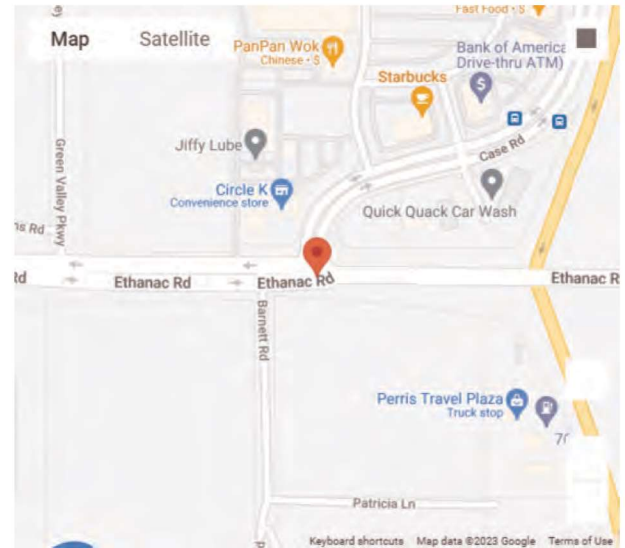


# Crash Details for: Case ID 81372654

## Crash Information

County	Riverside		
City	Perris		
Date & Time (M/D/Y)	12/15/2020 16:25		
Location (Intersection)	Case Rd & Ethanac Rd		
Dist. & Dir. from Intersection	At Intersection		
State Highway	No		
Geocoded Location	33.7429886, -117.1928101		
Type of Crash	C - Rear End		
Motor Vehicle Involved With	C - Other Motor Vehicle		
Crash Severity	4 - Injury (Complaint of Pain)		
PCF Violation Category	03 - Unsafe Speed		
Weather	A - Clear		
Alcohol Involved	No		
Pedestrian Accident	No	Bicycle Accident	No
Motorcycle Accident	No	Truck Accident	No

## Map View



## Street View



## Parties: 2

Party Number	Party Type	Statewide Vehicle Type	At Fault	Party Direction	Movement Preceding Collision
1	1 - Driver (including Hit and Run)	A - Passenger Car/Station Wagon	Yes	South	B - Proceeding Straight
2	1 - Driver (including Hit and Run)	A - Passenger Car/Station Wagon	No	South	A - Stopped

## Victims: 1

Party Number	Victim Role	Victim Gender	Victim Age	Victim Degree of Injury
2	1 - Driver	F - Female	33	7 - Possible Injury

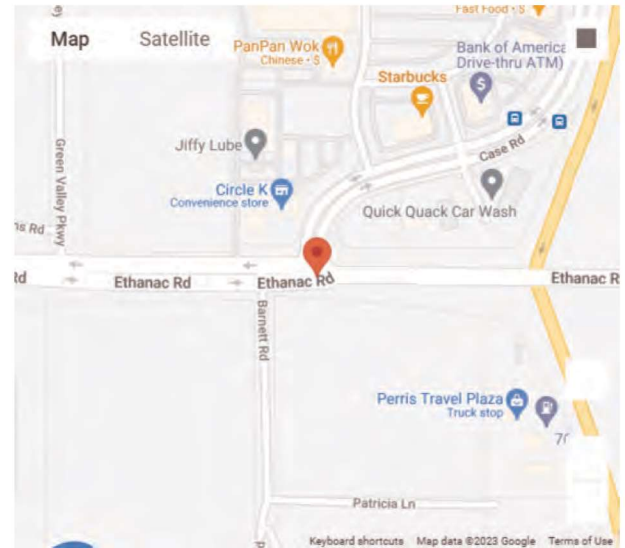


# Crash Details for: Case ID 81391826

## Crash Information

County	Riverside		
City	Perris		
Date & Time (M/D/Y)	01/19/2021 18:52		
Location (Intersection)	3150 Case Rd & Ethanac Rd		
Dist. & Dir. from Intersection	At Intersection		
State Highway	No		
Geocoded Location	33.7429886, -117.1928101		
Type of Crash	G - Vehicle/Pedestrian		
Motor Vehicle Involved With	B - Pedestrian		
Crash Severity	4 - Injury (Complaint of Pain)		
PCF Violation Category	22 - Other Improper Driving		
Weather	B - Cloudy		
Alcohol Involved	No		
Pedestrian Accident	Yes	Bicycle Accident	No
Motorcycle Accident	No	Truck Accident	No

## Map View



## Street View



## Parties: 2

Party Number	Party Type	Statewide Vehicle Type	At Fault	Party Direction	Movement Preceding Collision
1	1 - Driver (including Hit and Run)	D - Pickup or Panel Truck	Yes	East	E - Making Left Turn
2	2 - Pedestrian	N - Pedestrian	No	West	B - Proceeding Straight

## Victims: 1

Party Number	Victim Role	Victim Gender	Victim Age	Victim Degree of Injury
2	3 - Pedestrian	F - Female	48	7 - Possible Injury

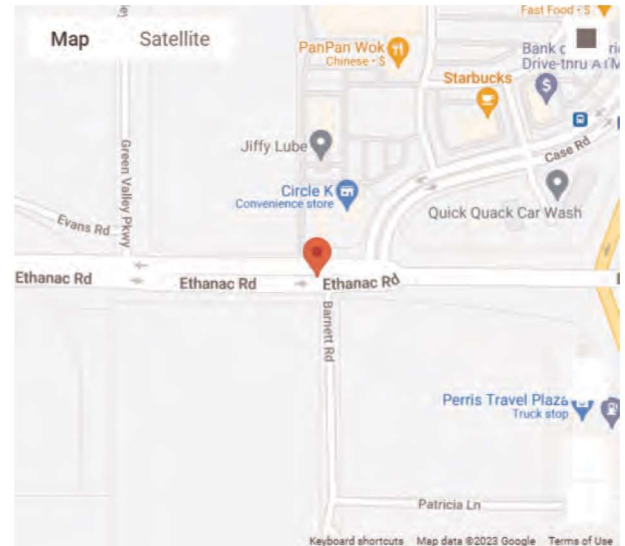


# Crash Details for: Case ID 81873901

## Crash Information

County	Riverside		
City	Perris		
Date & Time (M/D/Y)	09/19/2022 08:56		
Location (Intersection)	Ethanac Rd & Barnett Rd		
Dist. & Dir. from Intersection	39.00 ft West		
State Highway	No		
Geocoded Location	33.743, -117.1934586		
Type of Crash	D - Broadside		
Motor Vehicle Involved With	C - Other Motor Vehicle		
Crash Severity	4 - Injury (Complaint of Pain)		
PCF Violation Category	08 - Improper Turning		
Weather	A - Clear		
Alcohol Involved	No		
Pedestrian Accident	No	Bicycle Accident	No
Motorcycle Accident	Yes	Truck Accident	No

## Map View



## Street View



## Parties: 2

Party Number	Party Type	Statewide Vehicle Type	At Fault	Party Direction	Movement Preceding Collision
1	1 - Driver (including Hit and Run)	A - Passenger Car/Station Wagon	Yes	West	D - Making Right Turn
2	1 - Driver (including Hit and Run)	C - Motorcycle/Scooter	No	East	Q - Traveling Wrong Way

## Victims: 1

Party Number	Victim Role	Victim Gender	Victim Age	Victim Degree of Injury
2	1 - Driver	M - Male	16	7 - Possible Injury



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### 3. Errata to the Ethanac and Barnett Warehouse MND

This section contains revisions to the Public Review Draft MND based upon: (1) clarifications required to prepare a response to a specific comment; and/or (2) typographical errors. These revisions do not alter any impact significance conclusions as disclosed in the MND. Changes made to the MND are identified here in ~~strikeout~~ text to indicate deletions and in **bold underlined** text to signify additions.

#### Revisions in Response to Written Comments and County Changes to Text

The following text, organized by MND Chapters and Sections, has been revised in response to comments received on the MND and corrections identified by the City.

The following text revision was made to Section 3.4, Operational Characteristics, page 16 of the Public Review Draft MND in response to comment City of Perris, Appeal A2.4:

**The Project would be operated as an industrial two-unit warehouse. Typical operational characteristics include employees and customers traveling to and from the site, delivery of materials and supplies to the site, truck loading and unloading, and manufacturing activities. The Project is anticipated to operate 7 days a week 24 hours a day. The Project would not include cold storage or operation Transport Refrigeration Units (TRUs).**

The following text revision was made to Section 14, Population and Housing, page 156 of the Public Review Draft MND:

**a) Induce substantial unplanned population growth in an area, either directly or indirectly?**  
**Less Than Significant Impact ~~No Impact~~.** The proposed Project would redevelop the 13.89-acre Project site with 251,133 SF of warehouse and manufacturing uses. **As included in the VMT Trip Generation and VMT Screening Analysis (Figure 4), prepared by EPD Solutions, Inc. (Appendix M), the anticipated number of employees generated by the project is 336. Employee generation is based on the Western Riverside Council of Government (WRCOG), which incorporates data from the SCAG Regional Transportation Plan Sustainable Communities Strategy (RTP/SCS).** ~~According to SCAG, the generation rate for employees required for operation of an industrial project is 1 employee for every 1,195 SF of industrial space. Based on the SCAG employment generation rates, the Project is estimated to generate the need for approximately 210 employees.~~ The employees that would fill these roles are anticipated to come from the region, as the unemployment rate of the City of Menifee in July 2022 was 3.9 percent, the City of Perris was 4.8 percent, and the City of Murrieta was at 2.8 percent (State Employment Development Department 2022). Due to these levels of unemployment, it is anticipated that new employees at the Project site would already reside within commuting distance and would not generate needs for any housing.

In addition, should the Project require employees to relocate to the area for work, there is sufficient vacant housing available within the region. The City of Menifee has a vacancy rate of 6.3 percent. The City of Menifee has a total of 38,734 housing units; 36,308 of which are occupied (State Department of Finance 2022). Therefore, impacts related to unplanned population growth from the Project would be less than significant.

The following text revision was made to Section 17, Transportation, Threshold a) on page 164 of the Public Review Draft MND in response to comment City of Perris, Appeal A2.12:



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

(pg. 164)

As seen in Table T-3, all intersections anticipated to experience unsatisfactory LOS would improve to a satisfactory LOS with implementation of the proposed improvements. It should be noted that the ultimate planned configuration of Ethanac Road is that of a six-lane roadway. The roadway expansion would help reduce the delay experienced at the intersections of I-215 SB Ramps/NB Ramps and Ethanac Road. The LOS analysis provided is informational only and does not substantiate a significant impact under CEQA pursuant to Public Resources Code (PRC) § 21099(b)(2), which states that automobile delay, as described solely by LOS or similar measure of traffic congestion, is no longer considered a significant impact under CEQA. The information provided in this document has been incorporated upon request by the City to summarize analysis from the Traffic Impact Analysis (Appendix N) and disclose it as part of the CEQA process.