

NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION

Notice is hereby given that, as Lead Agency, the City of Roseville, Development Services Department, Planning Division has prepared an Initial Study leading to a **Mitigated Negative Declaration** for the project referenced below. This Mitigated Negative Declaration is available for public review and comment.

Project Title/File#: WRSP PCL W-20 – Coffee Shack; File #PL20-0142

Project Location: 1875 Pleasant Grove Boulevard, Roseville, Placer County, CA; APN 017-152-018-000

Project Owner: Chris Winter, Pulte Home Company, LLC

Project Applicant: David Cobbs, Baker Williams Engineering Group

Project Planner: Kinarik Shallow, Associate Planner

Project Description: The proposed project is a 910-square-foot drive-through coffee kiosk with associated parking, lighting, and landscaping. The project entitlements include a General Plan Amendment and Specific Plan Amendment to modify the land use from Low Density Residential (LDR) to Community Commercial (CC), a Rezone from Single-Family Residential/Development Standards (R1/DS) to Community Commercial (CC), a Development Agreement Amendment to reflect the land use change, a Conditional Use Permit to allow a drive-through use contiguous to a residential zoned parcel, and a Design Review Permit to approve the building architecture and site design.

Document Review and Availability: The public review and comment period begins on January 15, 2021 and ends on February 4, 2021. The **Mitigated Negative Declaration** may be reviewed online at <https://www.roseville.ca.us/cms/One.aspx?portalId=7964922&pageId=8774505>.

Written comments on the adequacy of the Mitigated Negative Declaration may be submitted to Kinarik Shallow, Associate Planner, at kshallow@roseville.ca.us and must be received no later than 5:00 pm on February 4, 2021. Due to the currently in place Placer County Stay at Home Directive, physical correspondence will not be able to be considered during the review period.

This project will be scheduled for a public hearing before the City's Planning Commission. At this hearing, the Planning Commission will consider the **Mitigated Negative Declaration** and associated project entitlements. A separate notice will be published once a hearing is scheduled.

Greg Bitter
Planning Manager

Dated: January 14, 2021

Publish: January 15, 2021

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Project Applicant: David Cobbs, Baker Williams Engineering Group
Property Owner: Chris Winter, Pulte Home Company, LLC
Lead Agency Contact Person: Kinarik Shallow, Associate Planner - City of Roseville; (916) 746-1309
Date: January 14, 2021

Project Description:

The proposed project is a 910-square-foot drive-through coffee kiosk with associated parking, lighting, and landscaping. The project entitlements include a General Plan Amendment and Specific Plan Amendment to modify the land use from Low Density Residential (LDR) to Community Commercial (CC), a Rezone from Single-Family Residential/Development Standards (R1/DS) to Community Commercial (CC), a Development Agreement Amendment to reflect the land use change, a Conditional Use Permit to allow a drive-through use contiguous to a residential zoned parcel, and a Design Review Permit to approve the building architecture and site design.

DECLARATION

The Planning Manager has determined that the above project will not have significant effects on the environment and therefore does not require preparation of an Environmental Impact Report. The determination is based on the attached initial study and the following findings:

- A. *The project will not have the potential to degrade the quality of the environment, substantially reduce the habitat of 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 an endangered, rare or threatened species, reduce the number or restrict the range of rare or endangered plants or animals or eliminate important examples of the major periods of California history or prehistory.*
- B. *The project will not have the potential to achieve short-term, to the disadvantage of long-term, environmental goals.*
- C. *The project will not have impacts, which are individually limited, but cumulatively considerable.*
- D. *The project will not have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly.*
- E. *No substantial evidence exists that the project may have a significant effect on the environment.*
- F. *The project incorporates all applicable mitigation measures identified in the attached initial study.*
- G. *This Mitigated Negative Declaration reflects the independent judgment of the lead agency.*

INITIAL STUDY & ENVIRONMENTAL CHECKLIST

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Project Applicant:	David Cobbs, Baker Williams Engineering Group
Property Owner:	Chris Winter, Pulte Home Company, LLC
Lead Agency Contact:	Kinarik Shallow, Associate Planner; Phone (916) 746-1309

This initial study has been prepared to identify and assess the anticipated environmental impacts of the above described project application. The document relies on previous environmental documents (see Attachments) and site-specific studies prepared to address in detail the effects or impacts associated with the project. Where documents were submitted by consultants working for the applicant, City staff reviewed such documents in order to determine whether, based on their own professional judgment and expertise, staff found such documents to be credible and persuasive. Staff has only relied on documents that reflect their independent judgment, and has not accepted at face value representations made by consultants for the applicant.

This document has been prepared to satisfy the California Environmental Quality Act (CEQA), (Public Resources Code, Section 21000 et seq.) and the State CEQA Guidelines (14 CCR 15000 et seq.). CEQA requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority before acting on those projects.

The initial study is a public document used by the decision-making lead agency to determine whether a project may have a significant effect on the environment. If the lead agency finds substantial evidence that any aspect of the project, either individually or cumulatively, may have a significant effect on the environment, regardless of whether the overall effect of the project is adverse or beneficial, the lead agency is required to prepare an EIR. If the agency finds no substantial evidence that the project or any of its aspects may cause a significant effect on the environment, a negative declaration shall be prepared. If in the course of analysis, the agency recognizes that the project may have a significant impact on the environment, but that by incorporating specific mitigation measures to which the applicant agrees, the impact will be reduced to a less than significant effect, a mitigated negative declaration shall be prepared.

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PROJECT DESCRIPTION

Project Location

The 0.61-acre project site is located at 1851 Pleasant Grove Boulevard, at the southeastern intersection of Upland Drive and Pleasant Grove Boulevard (see Figure 1). The site has frontage on both Pleasant Grove Boulevard and Upland Drive. The subject property is identified as Parcel W-20 of the West Roseville Specific Plan (WRSP) and has a zoning designation of Single-Family Residential/Development Standards (R1/DS) and a General Plan land use designation of Low Density Residential (LDR).

Figure 1: Project Location



Background

The WRSP was approved by City Council in February 2004. The WRSP area includes 3,162 acres in the northwest portion of the City, west of Fiddymont Road and generally north of Pleasant Grove Boulevard. An Environmental Impact Report (EIR) was certified with the WRSP (State Clearinghouse #2002082057), which examined the impacts of Specific Plan buildout. This addressed the major cumulative impacts of developing the Specific Plan as a whole, including the subject property (Parcel W-20). Although Parcel W-20 has a land use designation of LDR, the WRSP has not allocated any residential units to the site. The parcel was intended to be a landscape gateway for the Plan area.

Environmental Setting

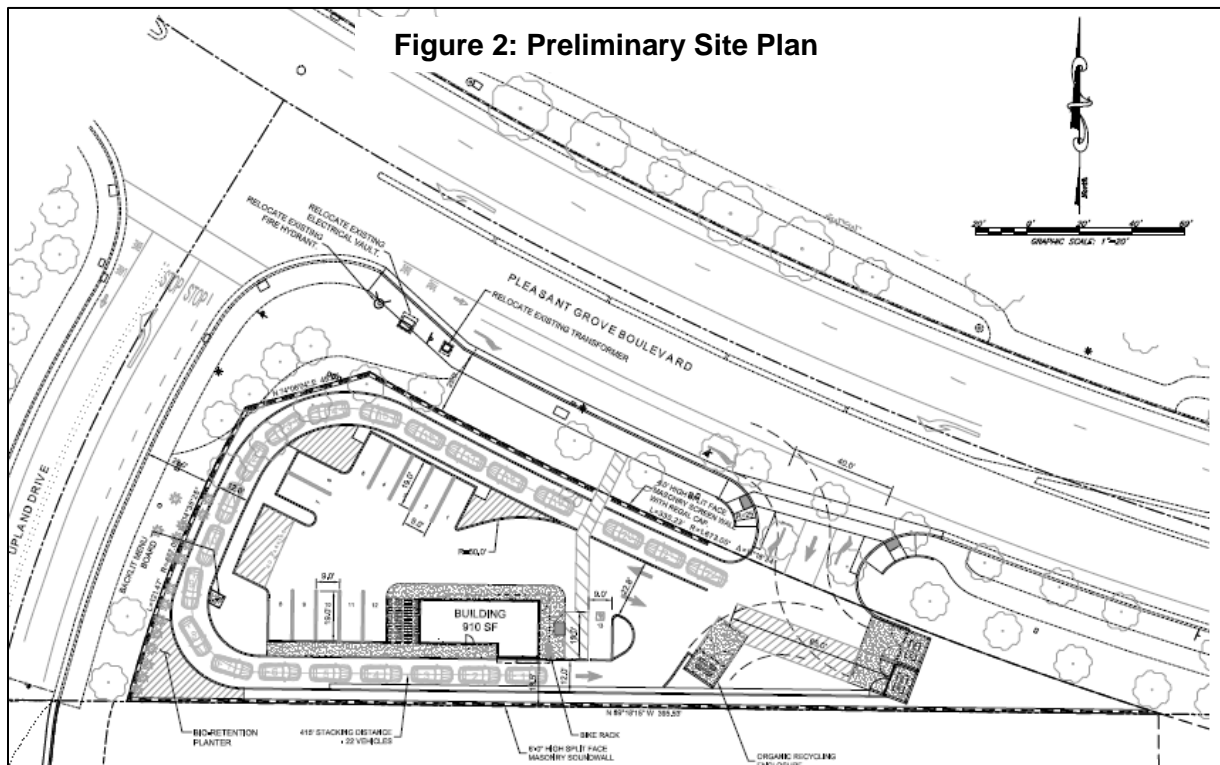
The project site is a triangular parcel that is undeveloped with the exception of frontage and landscape improvements along Pleasant Grove Boulevard to the north and Upland Drive to the west. Frontage improvements consist of sidewalks, curb, and gutter. The landscape along the frontage consists of street trees, accent trees, shrubs and groundcover. Vegetation on the site consists of native and non-native grasses. Excluding the landscaped area, there are no trees on the site. The site is adjacent to single-family residential uses to the north and east across Pleasant Grove Boulevard, a vacant High Density Residential (HDR) parcel to the south, and single-family residential uses to the west across Upland Drive. Table 1 below identifies the land use designation and uses of the site and surrounding properties.

Table 1: Adjacent Zoning and Land Use

Location	Zoning	General Plan Land Use	Actual Use of Property
Site	Single-Family Residential/Development Standards (R1/DS)	Low Density Residential (LDR)	Vacant
North	Pleasant Grove Boulevard with RS/DS beyond	LDR-5	Single-Family Residential
South	Attached Housing (R3)	High Density Residential (HDR-21.2)	Vacant
East	Pleasant Grove Boulevard with RS/DS beyond	LDR-5	Single-Family Residential
West	R1/DS	LDR-4	Single-Family Residential

Proposed Project

The proposed project includes construction of a 910-square-foot building for a drive-through coffee shop with associated parking, lighting, and landscaping. The site will consist of a single drive-through lane and a walk-up window for customers. No indoor seating will be provided, however the project does include an outdoor seating area. A total of thirteen (13) parking spaces will be provided on-site. The drive-through lane has a stacking distance of 380 feet, measured from the entrance of the drive-through to the pick-up window, which amounts to a capacity of 19 vehicles. Access to the site will be provided by a new driveway on Pleasant Grove Boulevard that will allow for right-in/right-out turning movements, with two inbound lanes and one outbound lane. A new right-turn deceleration lane will also be provided eastbound on Pleasant Grove Boulevard for vehicles approaching the entrance to the site. Construction of the new driveway will require demolition and construction along the frontage of Pleasant Grove Boulevard.



The site is currently zoned Single-Family Residential/Development Standards (R1/DS) and has a land use designation of Low Density Residential (LDR). Eating and drinking establishments, such as a drive-through coffee shop, is not a permitted use in the R1/DS zone. The project includes a General Plan Amendment, Specific Plan Amendment, and Rezone to amend the land use and zoning designation to Community Commercial (CC) to allow development of the drive-through coffee shop. The project also includes an Amendment to the Westpark Development Agreement to reflect the change in land use, a Conditional Use Permit to allow a drive-through use contiguous to a residential zoned parcel, and a Design Review Permit to approve the building architecture and site design.

CITY OF ROSEVILLE MITIGATION ORDINANCES, GUIDELINES, AND STANDARDS

For projects that are consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified, CEQA Guidelines section 15183(f) allows a lead agency to rely on previously adopted development policies or standards as mitigation for the environmental effects, when the standards have been adopted by the City, with findings based on substantial evidence, that the policies or standards will substantially mitigate environmental effects, unless substantial new information shows otherwise (CEQA Guidelines §15183(f)). The City of Roseville adopted CEQA Implementing Procedures (Implementing Procedures) which are consistent with this CEQA Guidelines section. The current version of the Implementing Procedures were adopted in April 2008, along with Findings of Fact, as Resolution 08-172. The below regulations and ordinances were found to provide uniform mitigating policies and standards, and are applicable to development projects. The City's Mitigating Policies and Standards are referenced, where applicable, in the Initial Study Checklist.

- City of Roseville 2035 General Plan
- City of Roseville Zoning Ordinance (RMC Title 19)
- City of Roseville Improvement Standards (Resolution 02-37)
- City of Roseville Construction Standards (Resolution 01-208)
- Subdivision Ordinance (RMC Title 18)
- Noise Regulation (RMC Ch.9.24)
- Flood Damage Prevention Ordinance (RMC Ch.9.80)
- Drainage Fees (Dry Creek [RMC Ch.4.49] and Pleasant Grove Creek [RMC Ch.4.48])
- West Placer Stormwater Quality Design Manual (Resolution 16-152)
- Urban Stormwater Quality Management and Discharge Control Ordinance (RMC Ch. 14.20)
- Traffic Mitigation Fee (RMC Ch.4.44)
- Highway 65 Joint Powers Authority Improvement Fee (Resolution 2008-02)
- South Placer Regional Transportation Authority Transportation and Air Quality Mitigation Fee (Resolution 09-05)
- Tree Preservation Ordinance (RMC Ch.19.66)
- Community Design Guidelines (Resolution 95-347)
- Specific Plan Design Guidelines:
 - West Roseville Specific Plan and Design Guidelines (Resolution 04-40)

OTHER ENVIRONMENTAL DOCUMENTS RELIED UPON

- Amoruso Ranch Specific Plan Final Environmental Impact Report, located online at: <http://roseville.ca.us/cms/One.aspx?portalId=7964922&pageId=8774579>

- West Roseville Specific Plan Environmental Impact Report (SCH #2002082057), located online at: <http://roseville.ca.us/cms/One.aspx?portalId=7964922&pageId=8775152>

Pursuant to CEQA Guidelines Section 15183, any project which is consistent with the development densities established by zoning, a Community Plan, or a General Plan for which an EIR was certified shall not require additional environmental review, except as may be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site. The Amoruso Ranch Specific Plan EIR updated the City's General Plan to 2035, and updated Citywide analyses of traffic, water supply, water treatment, wastewater treatment, and waste disposal. The proposed project is consistent with the adopted land use designations examined within the environmental documents listed above. This Initial Study focuses on effects particular to the specific project site, impacts which were not analyzed within the EIR, and impacts which may require revisiting due to substantial new information. When applicable, the topical sections within the Initial Study summarize the findings within the environmental documents listed above. The analysis, supporting technical materials, and findings of the environmental document are incorporated by reference, and are available for review at the Civic Center, 311 Vernon Street, Roseville, CA.

EXPLANATION OF INITIAL STUDY CHECKLIST

The California Environmental Quality Act (CEQA) Guidelines recommend that lead agencies use an Initial Study Checklist to determine potential impacts of the proposed project on the physical environment. The Initial Study Checklist provides a list of questions concerning a comprehensive array of environmental issue areas potentially affected by this project. This section of the Initial Study incorporates a portion of Appendix G Environmental Checklist Form, contained in the CEQA Guidelines. Within each topical section (e.g. Air Quality) a description of the setting is provided, followed by the checklist responses, thresholds used, and finally a discussion of each checklist answer.

There are four (4) possible answers to the Environmental Impacts Checklist on the following pages. Each possible answer is explained below:

- 1) A "Potentially Significant Impact" is appropriate if there is enough relevant information and reasonable inferences from the information that a fair argument based on substantial evidence can be made to support a conclusion that a substantial, or potentially substantial, adverse change may occur to any of the physical conditions within the area affected by the project. When one or more "Potentially significant Impact" entries are made, an EIR is required.
- 2) A "Less Than Significant With Mitigation" answer is appropriate when the lead agency incorporates mitigation measures to reduce an impact from "Potentially Significant" to "Less than Significant." For example, floodwater impacts could be reduced from a potentially-significant level to a less-than-significant level by relocating a building to an area outside of the floodway. The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less-than-significant level. Mitigation measures are identified as MM followed by a number.
- 3) A "Less Than significant Impact" answer is appropriate if there is evidence that one or more environmental impacts may occur, but the impacts are determined to be less than significant, or the application of development policies and standards to the project will reduce the impact(s) to a less-than-significant level. For instance, the application of the City's Improvement Standards reduces potential erosion impacts to a less-than-significant level.
- 4) A "No Impact" answer is appropriate where it can be demonstrated that the impact does not have the potential to adversely affect the environment. For instance, a project in the center of an urbanized area with no agricultural lands on or adjacent to the project area clearly would not have an adverse effect on

agricultural resources or operations. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources cited in the Initial Study. Where a “No Impact” answer is adequately supported by the information sources cited in the Initial Study, further narrative explanation is not required. A “No Impact” answer is explained when it is based on project-specific factors as well as generous standards.

All answers must take account of the whole action involved, including off- and on-site, indirect, direct, construction, and operation impacts, except as provided for under State CEQA Guidelines.

INITIAL STUDY CHECKLIST

I. Aesthetics

The project site is a triangular-shaped parcel located in a typical urbanized setting within a residential zoned area of the City’s West Roseville Specific Plan (WRSP) area. Public views of the site are from Pleasant Grove Boulevard to the north (a four-lane arterial roadway) and Upland Drive (a collector roadway) to the west, and their adjacent sidewalks. The foreground of the view includes completed landscaping, which includes street trees, groundcover, and shrubs. The site itself contains no distinct topography or other visual elements. Surrounding uses include a single-family subdivision to the north, east, and west, and an undeveloped High Density Residential parcel to the south.

Except as provided in Public Resources Code Section 21099, would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
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 a 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?			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?			X	

Thresholds of Significance and Regulatory Setting:

The significance of an environmental impact cannot always be determined through the use of a specific, quantifiable threshold. CEQA Guidelines Section 15064(b) affirms this by the statement “an ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting.” This is particularly true of aesthetic impacts. As an example, a proposed parking lot in a dense urban center would have markedly different visual effects than a parking lot in an open space area. For the purpose of this study, the significance thresholds are as stated in CEQA Guidelines Appendix G, as shown in a–d of the checklist below. The Findings of the Implementing Procedures indicate that compliance with the Zoning Ordinance (e.g. building height, setbacks, etc.), Subdivision Ordinance (RMC Ch. 18), Community Design Guidelines (Resolution 95-347), and applicable Specific Plan Policies and/or Specific Plan Design Guidelines will prevent significant impacts in urban settings as it relates to items a and b, below.

Discussion of Checklist Answers:

a–b) There are no designated or eligible scenic vistas or scenic highways within or adjacent to the City of Roseville.

c) The project site is in an urban setting and has street frontage along the northern and western property lines, with low density residential uses to the north, east, and west, and a future high density residential parcel to the south. The City of Roseville has adopted Community Design Guidelines (CDG) to establish common design elements and expectations for development within the City. The CDG includes provisions related to architectural design, site design and landscape design, to enhance the visual character of the urban environment. The project has been reviewed by City staff and was found to be consistent with the goals and policies of the CDG, the WRSP, and applicable zoning regulations. As such, impacts of the project related to this criterion are less than significant.

d) The project involves nighttime lighting to provide for the security and safety of project users. However, the project is already located within an urbanized setting with many existing lighting sources. Lighting for the project is conditioned to comply with City standards (i.e., Community Design Guidelines) to limit the height of light standards and to require cut-off lenses and glare shields to minimize light and glare impacts. The project will not create a new source of substantial light. None of the project elements are highly reflective, and therefore the project will not contribute to an increased source of glare. Impacts of the project are less than significant.

II. Agricultural & Forestry Resources

The State Department of Conservation oversees the Farmland Mapping and Monitoring Program, which was established to document the location, quality, and quantity of agricultural lands, and the conversion of those lands over time. The primary land use classifications on the maps generated through this program are: Urban and Built Up Land, Grazing Land, Farmland of Local Importance, Unique Farmland, Farmland of Statewide Importance, and Prime Farmland. According to the current California Department of Conservation Placer County Important Farmland Map (2012), the majority of the City of Roseville is designated as Urban and Built Up Land and most of the open space areas of the City are designated as Grazing Land. There are a few areas designated

as Farmland of Local Importance and two small areas designated as Unique Farmland located on the western side of the City along Baseline Road. The current Williamson Act Contract map (2013/2014) produced by the Department of Conservation shows that there are no Williamson Act contracts within the City, and only one (on PFE Road) that is adjacent to the City. None of the land within the City is considered forest land by the Board of Forestry and Fire Protection.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
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?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
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))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
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?				X

Thresholds of Significance and Regulatory Setting:

Unique Farmland, Farmland of Statewide Importance, and Prime Farmland are called out as protected farmland categories within CEQA Guidelines Appendix G. Neither the City nor the State has adopted quantified significance thresholds related to impacts to protected farmland categories or to agricultural and forestry resources. For the purpose of this study, the significance thresholds are as stated in CEQA Guidelines Appendix G, as shown in a–e of the checklist above.

Discussion of Checklist Answers:

a–e) The project site is not used for agricultural purposes, does not include agricultural zoning, is not within or adjacent to one of the areas of the City designated as a protected farmland category on the Placer County Important Farmland map, is not within or adjacent to land within a Williamson Act Contract, and is not considered forest land. Given the foregoing, the proposed project will have no impact on agricultural resources.

III. Air Quality

The City of Roseville, along with the south Placer County area, is located in the Sacramento Valley Air Basin (SVAB). The SVAB is within the Sacramento Federal Ozone Non-Attainment Area. Under the Clean Air Act, Placer County has been designated a "serious non-attainment" area for the federal 8-hour ozone standard, "non-attainment" for the state ozone standard, and a "non-attainment" area for the federal and state PM₁₀ standard (particulate matter less than 10 microns in diameter). Within Placer County, the Placer County Air Pollution Control District (PCAPCD) is responsible for ensuring that emission standards are not violated.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Result in a cumulatively considerable net increase of any criteria for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

Thresholds of Significance and Regulatory Setting:

In responding to checklist items a, b, and d, project-related air emissions would have a significant effect if they would result in concentrations that either violate an ambient air quality standard or contribute to an existing air quality violation. To assist in making this determination, the PCAPCD adopted thresholds of significance, which were developed by considering both the health-based ambient air quality standards and the attainment strategies outlined in the State Implementation Plan. The PCAPCD-recommended significance threshold for reactive organic gases (ROG) and nitrogen oxides (NO_x) is 82 pounds daily during construction and 55 pounds daily during operation, and for particulate matter (PM) is 82 pounds per day during both construction and operation. For all other constituents, significance is determined based on the concentration-based limits in the Federal and State Ambient Air Quality Standards. Toxic Air Contaminants (TAC) are also of public health concern, but no thresholds or standards are provided because they are considered to have no safe level of exposure. Analysis of TAC is based on the *Air Quality and Land Use Handbook – A Community Health Perspective* (April 2005, California Air Resources Board), which lists TAC sources and recommended buffer distances from sensitive uses. For checklist item c, the PCAPCD's *CEQA Air Quality Handbook (Handbook)* recommends that the same thresholds used for the project analysis be used for the cumulative impact analysis.

With regard to checklist item d, there are no quantified significance thresholds for exposure to objectionable odors. Significance is determined after taking into account multiple factors, including screening distances from odor sources (as found in the PCAPCD CEQA Handbook), the direction and frequency of prevailing winds, the time of day when odors are present, and the nature and intensity of the odor source.

Discussion of Checklist Answers:

a-c) Analyses are not included for sulfur dioxide, lead, and other constituents because there are no mass emission thresholds; these are concentration-based limits in the Federal and State Ambient Air Quality Standards which require substantial, point-source emissions (e.g. refineries, concrete plants, etc) before exceedance will occur, and the SVAB is in attainment for these constituents. Likewise, carbon monoxide is not analyzed because the SVAB is in attainment for this constituent, and it requires high localized concentrations (called carbon monoxide “hot spots”) before the ambient air quality standard would be exceeded. “Hot spots” are typically associated with heavy traffic congestion occurring at high-volume roadway intersections. The Amoruso Ranch EIR analysis of Citywide traffic indicated that 198 out of 226 signalized intersections would operate at level of service C or better—that is, they will not experience heavy traffic congestion. It further indicated that analyses of existing CO concentrations at the most congested intersections in Roseville show that CO levels are well below federal and state ambient air quality standards. The discussions below focus on emissions of ROG, NO_x, or PM. A project-level analysis has been prepared to determine whether the project will, on a singular level, exceed the established thresholds.

The PCAPCD recommends that lead agencies use the California Emissions Estimator Model (CalEEMod) to quantify a project's construction and operational emissions for criteria air pollutants (NOX, ROG, and PM). The results are then compared to the significance thresholds established by the district, as detailed above. According to PCAPCD's published screening table, general commercial projects smaller than 249,099 square feet will not result in NOX emissions that exceed 55 lbs/day. Typically, NOX emissions are substantially higher than ROG and PM10; therefore, it can be assumed that projects that do not exceed the NOX threshold will not exceed the ROG and PM10 thresholds, and will not result in a significant impact related to operational emissions.

The project proposes the construction of a 910-square-foot building, which is well below PCAPCD's modeled example. Given its small size, the project is not expected to result in construction or operational emissions that would exceed the district's thresholds for significance. To substantiate this assumption, the proposed project's emissions were modeled using CalEEMod (version 2016.3.2). The CalEEMod was run using the model defaults as well as project specific information such as land use and building square footage. The results are included as Attachment 2 and are summarized in Table 2 below. The modeled emissions for the project do not exceed

the construction and operational thresholds of significance. Therefore, the project will not result in a significant impact related to construction or operational emissions. Impacts are less than significant.

Table 2: CalEEMod Results

Pollutant	Project Emissions (lbs/day)	Significance Threshold (lbs/day)	Exceeds Threshold?
Construction Emissions			
ROG	1.9	82	No
NO _x	7.9	82	No
PM ₁₀	1.24	82	No
Operational Emissions			
ROG	1.03	55	No
NO _x	5.29	55	No
PM ₁₀	1.33	82	No

The project must also comply with all applicable PCAPCD rules and regulations. The project would not substantially contribute to the region's nonattainment status for ozone or particulate matter, and implementation of the project will not violate an air quality standard or contribute to an existing or projected air quality violation. In addition, because the proposed project would not produce substantial emissions of criteria air pollutants, adjacent residents or businesses would not be exposed to significant levels of pollutant concentrations during construction or operation. Therefore, implementation of the proposed project would result in less-than-significant impacts.

With regard to TAC, there are hundreds of constituents which are considered toxic, but they are typically generated by stationary sources like gas stations, facilities using solvents, and heavy industrial operations. The proposed project is not a TAC-generating use, nor is it within the specified buffer area of a TAC-generating use, as established in the *Air Quality and Land Use Handbook – A Community Health Perspective*. Impacts are less than significant.

d) Diesel fumes from construction equipment and delivery trucks are often found to be objectionable; however, construction is temporary and diesel emissions are minimal and regulated. Typical urban projects such as residences and retail businesses generally do not result in substantial objectionable odors when operated in compliance with City Ordinances (e.g. proper trash disposal and storage). The Project is a typical urban development that lacks any characteristics that would cause the generation of substantial unpleasant odors. Thus, construction and operation of the proposed project would not result in the creation of objectionable odors affecting a substantial number of people. A review of the project surroundings indicates that there are no substantial odor-generating uses near the project site; the project location meets the recommended screening distances from odor-generators provided by the PCAPCD. Impacts related to odors are less than significant.

IV. Biological Resources

The project site is undeveloped with the exception of frontage and landscape improvements along Pleasant Grove Boulevard to the north and Upland Drive to the west. Frontage improvements consist of sidewalks, curb, and gutter. The landscape along the frontage consists of street trees, accent trees, shrubs and groundcover. Vegetation on the site consists of native and non-native grasses. Excluding the landscaped area, there are no trees on the site. There are no existing wetland features or designated open space areas on the site. The site is adjacent to single-family residential uses to the north and east across Pleasant Grove Boulevard, a vacant High Density Residential (HDR) parcel to the south, and single-family residential uses to the west across Upland Drive.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
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?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			X	
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?				X

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
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?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
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?				X

Thresholds of Significance and Regulatory Setting:

There is no ironclad definition of significance as it relates to biological resources. Thus, the significance of impacts to biological resources is defined by the use of expert judgment supported by facts, and relies on the policies, codes, and regulations adopted by the City and by regulatory agencies which relate to biological resources (as cited and described in the Discussion of Checklist Answers section). Thresholds for assessing the significance of environmental impacts are based on the CEQA Guidelines checklist items a–f, above. Consistent with CEQA Guidelines Section 15065, a project may have a significant effect on the environment if:

The project has 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; [or] substantially reduce the number or restrict the range of an endangered, rare or threatened species . . .

Various agencies regulate impacts to the habitats and animals addressed by the CEQA Guidelines checklist. These include the United States Fish and Wildlife Service, National Oceanic and Atmospheric Administration–Fisheries, United States Army Corps of Engineers, Central Valley Regional Water Quality Control Board, and California Department of Fish and Wildlife. The primary regulations affecting biological resources are described in the sections below.

Checklist item a addresses impacts to special status species. A “special status” species is one which has been identified as having relative scarcity and/or declining populations. Special status species include those formally listed as threatened or endangered, those proposed for formal listing, candidates for federal listing, and those classified as species of special concern. Also included are those species considered to be “fully protected” by the California Department of Fish and Wildlife (California Fish and Wildlife), those granted “special animal” status for tracking and monitoring purposes, and those plant species considered to be rare, threatened, or endangered

in California by the California Native Plant Society (CNPS). The primary regulatory protections for special status species are within the Federal Endangered Species Act, California Endangered Species Act, California Fish and Game Code, and the Federal Migratory Bird Treaty Act (MBTA).

Checklist item b addresses all “sensitive natural communities” that may be affected by local, state, or federal regulations/policies while checklist item c focuses specifically on one type of such a community: federally-protected wetlands. Focusing first on wetlands, there are two questions to be posed in examining wet habitats: the first is whether the wetted area meets the technical definition of a wetland, making it subject to checklist item b, and the second is whether the wetland is subject to federal jurisdiction, making it subject to checklist item c. The 1987 Army Corps Wetlands Delineation Manual is used to determine whether an area meets the technical criteria for a wetland. A delineation verification by the Army Corps verifies the size and condition of the wetlands and other waters in question, and determines the extent of government jurisdiction as it relates to Section 404 of the Federal Clean Water Act and Section 401 of the State Clean Water Act.

The Clean Water Act protects all “navigable waters”, which are defined as traditional navigable waters that are or were used for commerce, or may be used for interstate commerce; tributaries of covered waters; and wetlands adjacent to covered waters, including tributaries. Non-navigable waters are called isolated wetlands, and are not subject to either the Federal or State Clean Water Act. Thus, isolated wetlands are not subject to federal wetland protection regulations. However, in addition to the Clean Water Act, the State also has jurisdiction over impacts to surface waters through the Porter-Cologne Water Quality Control Act (Porter-Cologne), which does not require that waters be “navigable”. For this reason, isolated wetlands are regulated by the State of California pursuant to Porter-Cologne. The City of Roseville General Plan also provides protection for wetlands, including isolated wetlands, pursuant to the General Plan Open Space and Conservation Element. Federal, State and City regulations/policies all seek to achieve no net loss of wetland acreage, values, or function.

Aside from wetlands, checklist item b also addresses other “sensitive natural communities,” which includes any habitats protected by local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. The City of Roseville General Plan Open Space and Conservation Element includes policies for the protection of riparian areas (streamside habitat) and floodplain areas; these are Vegetation and Wildlife section Policies 2 and 3. Policy 4 also directs preservation of additional area around stream corridors and floodplain if there is sensitive woodland, grassland, or other habitat which could be made part of a contiguous open space area. Other than wetlands, which were already discussed, US Fish and Wildlife and California Department of Fish and Wildlife habitat protections generally result from species protections, and are thus addressed via checklist item a.

For checklist item d, there are no regulations specific to the protection of migratory corridors. This item is addressed by an analysis of the habitats present in the vicinity and analyzing the probable effects on access to those habitats which will result from a project.

The City of Roseville Tree Preservation ordinance (RMC Ch.19.66) requires protection of native oak trees, and compensation for oak tree removal. The Findings of the Implementing Procedures indicate that compliance with the City of Roseville Tree Preservation ordinance (RMC Ch.19.66) will prevent significant impacts related to loss of native oak trees, referenced by item e, above.

Regarding checklist item f, there are no adopted Habitat Conservation Plans within the City of Roseville.

Discussion of Checklist Answers:

a-b) A Biological Resource Assessment was prepared as part of the WRSP. The assessment included a list of species with the potential to occur within the WRSP plan area based on surveys conducted by the project biologists. A review of this list determined that the project site contains potential foraging habitat for Swainson’s hawks. Strategies for preserving on-site grasslands as raptor and migratory bird foraging habitat were addressed

in the Operations & Maintenance Plan prepared pursuant to the Clean Water Act Section 404 Permit obtained for the WRSP. Mitigation for Swainson’s hawk foraging habitat would concurrently mitigate for loss of habitat for a number of other wildlife species in the region such as burrowing owl, red-tailed hawk, white-tailed kite, northern harrier, and loggerhead shrike among many others. The WRSP EIR included a Swainson’s hawk Grassland Habitat Mitigation Plan that was developed based upon consultation with California Department of Fish and Wildlife (CDFW), to mitigate for the loss of grassland foraging habitat. Pursuant to the WRSP EIR Mitigation Measure 4.7-8, the Swainson’s hawk Grassland Habitat Mitigation Program shall be implemented by the project applicants prior to approval of grading permits. As this is a requirement of the specific plan, no mitigation is required. This measure will ensure that no special status species are impacted during grading and ground disturbing activities. Although the site lacks habitat, construction activities have potential to disrupt offsite nesting species. **Mitigation Measure BIO-1** is required to ensure that special status migratory birds and raptors are not harmed. Ground disturbing activities shall not occur during the active nesting season. However, if it is necessary to conduct such activities during the nesting season, preconstruction surveys and mitigation as described in **Mitigation Measure BIO-1** would be required to ensure that fully protected bird and raptor species are not injured or disturbed by construction in the vicinity of nesting habitat. With implementation of this measure, impacts are less than significant.

c) No wetland features are present on the subject property; thus, the project will have no impact with regard to this criterion.

d) The City includes an interconnected network of open space corridors and preserves located throughout the City, to ensure that the movement of wildlife is not substantially impeded as the City develops. The development of the project site will not negatively impact these existing and planned open space corridors, nor is the project site located in an area that has been designated by the City, United States Fish and Wildlife, or California Department of Fish and Wildlife as vital or important for the movement of wildlife or the use of native wildlife nursery sites.

e) There are no biological resources on the project site which are protected by City policies or ordinances.

f) There are no Habitat Conservation Plans; Natural Community Conservation Plans; or other approved local, regional, or state habitat conservation plans that apply to the project site.

V. Cultural Resources

As described within the Open Space and Conservation Element of the City of Roseville General Plan, the Roseville region was within the territory of the Nisenan (also Southern Maidu or Valley Maidu). Two large permanent Nisenan habitation sites have been identified and protected within the City’s open space (in Maidu Park). Numerous smaller cultural resources, such as midden deposits and bedrock mortars, have also been recorded in the City. The gold rush which began in 1848 marked another settlement period, and evidence of Roseville’s ranching and mining past are still found today. Historic features include rock walls, ditches, low terraces, and other remnants of settlement and activity. A majority of documented sites within the City are located in areas designated for open space uses.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of an historic resource pursuant to Section 15064.5?			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?			X	
c) Disturb any human remains, including those interred outside of dedicated cemeteries?			X	

Thresholds of Significance and Regulatory Setting:

The significance of impacts to cultural resources is based directly on the CEQA Guidelines checklist items a–e listed above. The Archaeological, Historic, and Cultural Resources section of the City of Roseville General Plan also directs the proper evaluation of and, when feasible, protection of significant resources (Policies 1 and 2). There are also various federal and State regulations regarding the treatment and protection of cultural resources, including the National Historic Preservation Act and the Antiquities Act (which regulate items of significance in history), Section 7050.5 of the California Health and Safety Code, Section 5097.9 of the California Public Resources Code (which regulates the treatment of human remains) and Section 21073 et seq. of the California Public Resources Code (regarding Tribal Cultural Resources). The CEQA Guidelines also contains specific sections, other than the checklist items, related to the treatment of effects on historic resources.

Pursuant to the CEQA Guidelines, if it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (Section 21083.2 (a), (b), and (c)). A *historical resource* is a resource listed, or determined to be eligible for listing, in the California Register of Historical Resources (CRHR) (Section 21084.1); a resource included in a local register of historical resources (Section 15064.5(a)(2)); or any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant (Section 15064.5 (a)(3)). Public Resources Code Section 5024.1 requires evaluation of historical resources to determine their eligibility for listing on the CRHR.

Discussion of Checklist Answers:

a–c) No cultural resources are known to exist on the project site per the WRSP EIR; however, standard mitigation measures apply which are designed to reduce impacts to cultural resources, should any be found on-site (WRSP MM 4.8-1 and MM 4.8-10, listed below). The measures requires an immediate cessation of work, and contact with the appropriate agencies to address the resource before work can resume. This mitigation need not be applied herein, as it is already applicable and required of the project pursuant to the WRSP. The project will not result in any new impacts beyond those already discussed and disclosed in the WRSP EIR. Compliance with policies intended to protect cultural resources will ensure that project-specific impacts are less than significant.

2004 WRSP EIR MM 4.8-1: Cease Work and Consult with Qualified Archaeologist: Should any cultural resources, such as structural features, any amount of bone or shell, artifacts, human remains, or architectural remains be encountered during any subsurface development activities, work shall be suspended within 100 feet of the find, and the City of Roseville shall be immediately notified. At that time, the City shall coordinate any necessary investigation of the site with qualified archaeologists as needed to assess the resource and provide

proper management recommendations. Possible management recommendations for important resources could include resource avoidance or data recovery excavations. The contractor shall implement any measures deemed necessary for the protection of the cultural resources. In addition, pursuant to section 5097.98 of the State Public Resources Code, and section 7050.5 of the State Health and Safety Code, in the event of the discovery of human remains, the County Coroner shall be immediately notified. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains.

2004 WRSP EIR MM 4.8-10: Cease Work Until Review Conducted by Qualified Paleontologist and Recommendations Implemented: Should any evidence of paleontological resources (e.g., fossils) be encountered during grading or excavation, work shall be suspended within 100 feet of the find, and the City of Roseville shall be immediately notified. At that time, the City shall coordinate any necessary investigation of the site with a qualified paleontologist to assess the resource and provide proper management recommendations. Possible management recommendations for important resources could include resource avoidance or data recovery excavations. The contractor shall implement any measures deemed necessary by the paleontologist for the protection of the paleontological resources.

VI. Energy

Roseville Electric provides electrical power in the City and Pacific Gas and Electric (PG&E) provides natural gas. The City purchases wholesale electrical power from both the Western Area Power Administration (WAPA), which is generated by the federal government’s Central Valley Project, which produces 100 percent hydroelectric energy sources from a system of dams, reservoirs, and power plants within central and northern California. In addition, up to 50 percent of the City’s power is generated at the City-owned Roseville Energy Park (REP). The REP is a 160 megawatt natural-gas-fired power plant that uses a combined cycle gas turbine technology. The City also owns the 48 megawatt combustion-turbine Roseville Power Plant 2 (REP 2), which is used for peaking energy. The City’s electric power mix varies from year-to-year, but according to the most recent Citywide energy analysis (the Amoruso Ranch Environmental Impact Report), the mix in 2013/2014 was 25% eligible renewable (geothermal, small hydroelectric, and wind), 14% hydroelectric, 48% natural gas, and 13% from other sources (power purchased by contract).

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X	

Thresholds of Significance and Regulatory Setting:

Established in 2002, California’s Renewable Portfolio Standard (RPS) currently requires that 33 percent of electricity retail sales be served by renewable energy resources by 2020, and 50 percent by 2030. The City published a Renewables Portfolio Standard Procurement Plan in June 2018, and continues to comply with the

RPS reporting and requirements and standards. There are no numeric significance thresholds to define “wasteful, inefficient, or unnecessary” energy consumption, and therefore significance is based on CEQA Guidelines checklist items a and b, above, and by the use of expert judgment supported by facts, relying on the policies, codes, and regulations adopted by the City and by regulatory agencies which relate to energy. The analysis considers compliance with regulations and standards, project design as it relates to energy use (including transportation energy), whether the project will result in a substantial unplanned demand on the City’s energy resources, and whether the project will impede the ability of the City to meet the RPS standards.

Discussion of Checklist Answers:

a-b) The project would consume energy both during project construction and during project operation. During construction, fossil fuels, electricity, and natural gas would be used by construction vehicles and equipment. However, the energy consumed during construction would be temporary, and would not represent a significant demand on available resources. There are no unusual project characteristics that would necessitate the use of construction equipment or methods that would be less energy-efficient or which would be wasteful.

The completed project would consume energy related to building operation, exterior lighting, landscape irrigation and maintenance, and vehicle trips to and from the use. In accordance with California Energy Code Title 24, the project would be required to meet the Building Energy Efficiency Standards. This includes standards for water and space heating and cooling equipment; insulation for doors, pipes, walls, and ceilings; and appliances, to name a few. The project would also be eligible for rebates and other financial incentives from both the electric and gas providers for the purchase of energy-efficient appliances and systems, which would further reduce the operational energy demand of the project. The project was distributed to both PG&E and Roseville Electric for comments, and was found to conform to the standards of both providers; energy supplies are available to serve the project.

VII. Geology and Soils

As described in the Safety Element of the City of Roseville General Plan, there are three inactive faults (Volcano Hill, Linda Creek, and an unnamed fault) in the vicinity, but there are no known active seismic faults within Placer County. The last seismic event recorded in the South Placer area occurred in 1908, and is estimated to have been at least a 4.0 on the Richter Scale. Due to the geographic location and soil characteristics within the City, the General Plan indicates that soil liquefaction, landslides, and subsidence are not a significant risk in the area.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
i) Ruptures 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.)			X	
• Strong seismic ground shaking?			X	
• Seismic-related ground failure, including liquefaction?			X	
• Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located in a geological 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?				X
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?				X
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?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to geology and soils is based directly on the CEQA Guidelines checklist items a–e listed above. Regulations applicable to this topic include the Alquist-Priolo Act, which addresses earthquake safety in building permits, and the Seismic Hazards Mapping Act, which requires the state to gather and publish data on the location and risk of seismic faults.

The Findings of the Implementing Procedures indicate that compliance with the Flood Damage Prevention Ordinance (RMC Ch.9.80) and Design/Construction Standards (Resolution 07-107) will prevent significant impacts related to checklist item b. The Ordinance and standards include permit requirements for construction and development in erosion-prone areas and ensure that grading activities will not result in significant soil erosion or loss of topsoil. The use of septic tanks or alternative waste systems is not permitted in the City of Roseville, and therefore no analysis of criterion e is necessary.

Discussion of Checklist Answers:

a) The project will not expose people or structures to potential substantial adverse effects involving seismic shaking, ground failure or landslides.

i–iii) According to United States Geological Service mapping and literature, active faults are largely considered to be those which have had movement within the last 10,000 years (within the Holocene or Historic time periods)¹ and there are no major active faults in Placer County. The California Geological Survey has prepared a map of the state which shows the earthquake shaking potential of areas throughout California based primarily on an area's distance from known active faults. The map shows that the City lies in a relatively low-intensity ground-shaking zone. Commercial, institutional, and residential buildings as well as all related infrastructure are required, in conformance with Chapter 16, *Structural Design Requirements*, Division IV, *Earthquake Design* of the California Building Code, to lessen the exposure to potentially damaging vibrations through seismic-resistant design. In compliance with the Code, all structures in the Project area would be well-built to withstand ground shaking from possible earthquakes in the region; impacts are less than significant.

iv) Landslides typically occur where soils on steep slopes become saturated or where natural or manmade conditions have taken away supporting structures and vegetation. The existing and proposed slopes of the project site are not steep enough to present a hazard during development or upon completion of the project. In addition, measures would be incorporated during construction to shore minor slopes and prevent potential earth movement. Therefore, impacts associated with landslides are less than significant.

b) Grading activities will result in the disruption, displacement, compaction and over-covering of soils associated with site preparation (grading and trenching for utilities). Grading activities for the project will be limited to the project site. Grading activities require a grading permit from the Engineering Division. The grading permit is reviewed for compliance with the City's Improvement Standards, including the provision of proper drainage, appropriate dust control, and erosion control measures. Grading and erosion control measures will be incorporated into the required grading plans and improvement plans. Therefore, the impacts associated with disruption, displacement, and compaction of soils associated with the project are less than significant.

c, d) A review of the Natural Resources Conservation Service Soil Survey for Placer County, accessed via the Web Soil Survey (<http://websoilsurvey.nrcs.usda.gov/app/>), indicates that the soils on the site are Cometa-Fiddyment complex, 1 to 5 percent slopes, and San Joaquin-Cometa sandy loams, 1 to 5 percent slopes which are not listed as geologically unstable or sensitive. Therefore, the project has no impacts related to this criteria.

¹ United States Geological Survey, <http://earthquake.usgs.gov/learn/glossary/?term=active%20fault>, Accessed January 2016

f) No paleontological resources are known to exist on the project site per the WRSP EIR; however, standard mitigation measures apply which are designed to reduce impacts to such resources, should any be found on-site. The measure requires an immediate cessation of work, and contact with the appropriate agencies to address the resource before work can resume. With these measures in place, project-specific impacts are less than significant.

VIII. Greenhouse Gases

Greenhouse gases trap heat in the earth’s atmosphere. The principal greenhouse gases (GHGs) that enter the atmosphere because of human activities are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated gases. As explained by the United States Environmental Protection Agency², global average temperature has increased by more than 1.5 degrees Fahrenheit since the late 1800s, and most of the warming of the past half century has been caused by human emissions. The City has taken proactive steps to reduce greenhouse gas emissions, which include the introduction of General Plan policies to reduce emissions, changes to City operations, and climate action initiatives.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

Thresholds of Significance and Regulatory Setting:

In Assembly Bill 32 (the California Global Warming Solutions Act), signed by Governor Schwarzenegger of California in September 2006, the legislature found that climate change resulting from global warming was a threat to California, and directed that “the State Air Resources Board design emissions reduction measures to meet the statewide emissions limits for greenhouse gases . . .”. The target established in AB 32 was to reduce emissions to 1990 levels by the year 2020. CARB subsequently prepared the *Climate Change Scoping Plan* (Scoping Plan) for California, which was approved in 2008. The Scoping Plan provides the outline for actions to reduce California’s GHG emissions. CARB’s updated August 2011 Scoping Plan calculated a reduction needed of 21.7% from future “Business As Usual” (BAU) conditions in the year 2020. The current Scoping Plan (adopted May 2014) indicates that statewide emissions of GHG in 1990 amounted to 431 million metric tons, and that the 2020 “Business As Usual” (BAU) scenario is estimated as 509³ million metric tons, which would require a reduction of 15.3% from 2020 BAU. In addition to this, Senate Bill 32 was signed by the Governor on September 8, 2016, to establish a reduction target of 40 percent below 1990 levels by 2030. The Air Resources Board is currently updating the Scoping Plan to reflect this target.

² <http://www3.epa.gov/climatechange/science/overview.html>, Accessed January 2016

³ Includes Pavey and Renewables Portfolio Standard reduction

The Placer County Air Pollution Control District (PCAPCD) recommends that thresholds of significance for GHG be related to AB 32 reduction goals, and has adopted thresholds of significance which take into account the 2030 reduction target. The thresholds include a de minimis and a bright-line maximum threshold. Any project emitting less than 1,100 metric tons of carbon dioxide equivalents per year (MT CO₂e/yr) during construction or operation results in less than significant impacts. The PCAPCD considers any project with emissions greater than the bright-line cap of 10,000 MT CO₂e/yr to have significant impacts. For projects exceeding the de minimum threshold but below the bright-line threshold, comparison to the appropriate efficiency threshold is recommended. The significance thresholds are shown in Table 3 below.

Table 3: GHG Significance Thresholds

Bright-line Threshold 10,000 MT CO₂e/yr			
Residential Efficiency (MT CO₂e/capita¹)		Non-Residential Efficiency (MT CO₂e/ksf²)	
Urban	Rural	Urban	Rural
4.5	5.5	26.5	27.3
De Minimis Threshold 1,100 MT CO₂e/yr			
1. Per Capita = per person			
2. Per ksf = per 1,000 square feet of building			

Discussion of Checklist Answers:

a–b) Greenhouse gases are primarily emitted as a result of vehicle operation associated with trips to and from a project, and energy consumption from operation of the buildings. Greenhouse gases from vehicles is assessed based on the vehicle miles traveled (VMT) resulting from a project, on a Citywide basis. Residential projects, destination centers (such as a regional mall), and major employers tend to increase VMT in a study area, either by adding new residents traveling in an area, or by encouraging longer trip lengths and drawing in trips from a broader regional area. However, non-residential projects and neighborhood-serving uses (e.g. neighborhood parks) tend to lower VMT in a study area because they do not generate new trips within the study area, they divert existing trips. These trips are diverted because the new use location is closer to home, on their way to another destination (e.g. work), or is otherwise more convenient.

The proposed project is a 910-square-foot drive-through coffee shop. As further discussed and evaluated in Section XVII (Transportation) of this Initial Study, the project is considered a locally-serving use that does not include any unique characteristics which would draw in regional traffic, or which would prompt longer trips. The project is presumed to have a less-than-significant impact to the transportation system on the basis of project-generated VMT. Therefore, the focus of this analysis is on the emissions which would result from the construction and operation of the project.

As detailed in Attachment 2, CalEEMod (version 2016.3.2) was used to model the project’s construction related and operational related GHG emissions (CO₂e). Construction-related GHG emissions occur at one point in time and are therefore not typically expected to significantly contribute to climate change. Climate change is a cumulative effect that occurs over time, as emissions increase on a year-to-year basis due to increases in developed area and other factors; construction emissions are a one-time emission source, which end once the project is built. The CalEEMod results indicate the project would result in annual construction emissions of 60.87 CO₂e in the most active construction year, which is below the PCAPCD de minimis threshold of 1,100 MT CO₂e/yr. Thus, the project-generated GHG emissions would not result in significant construction emissions of GHG.

The operational emissions of the project include energy to run the building, area emissions such as landscape equipment to maintain the site, and water and wastewater energy demands. According to the CalEEMod results,

the project would result in annual operational emissions of 272.42 MT CO₂e, which is below the de minimis threshold of 1,100 MT CO₂e. Therefore, the proposed project would not result in significant operational emissions of GHG.

Based on the evaluation above, project-generated GHG emissions would not conflict with, and are consistent with, the State goals listed in AB32 and policies and regulation adopted by the California Air Resources Board pursuant to AB32. This impact is considered less than significant.

IX. Hazards and Hazardous Materials

There are no hazardous cleanup sites of record within 1,000 feet of the site according to both the State Water Resources Control Envirostor database (<http://geotracker.waterboards.ca.gov/>) and the Department of Toxic Substances Control Envirostor database (<http://www.envirostor.dtsc.ca.gov/public/>). The project is not located on a site where existing hazardous materials have been identified, and the project does not have the potential to expose individuals to hazardous materials.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment though reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
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?				X

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				X

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to hazardous materials is based directly on the CEQA Guidelines checklist items a–h listed above. A material is defined as hazardous if it appears on a list of hazardous materials prepared by a federal, state or local regulatory agency, or if it has characteristics defined as hazardous by such an agency. The determination of significance based on the above criteria depends on the probable frequency and severity of consequences to people who might be exposed to the health hazard, and the degree to which Project design or existing regulations would reduce the frequency of or severity of exposure. As an example, products commonly used for household cleaning are classified as hazardous when transported in large quantities, but one would not conclude that the presence of small quantities of household cleaners at a home would pose a risk to a school located within ¼-mile.

Many federal and State agencies regulate hazards and hazardous substances, including the United States Environmental Protection Agency (US EPA), California Department of Toxic Substances Control (DTSC), Central Valley Regional Water Quality Control Board (Regional Water Board), and the California Occupational Safety and Health Administration (CalOSHA). The state has been granted primacy (primary responsibility for oversight) by the US EPA to administer and enforce hazardous waste management programs. State regulations also have detailed planning and management requirements to ensure that hazardous materials are handled, stored, and disposed of properly to reduce human health risks. California regulations pertaining to hazardous waste management are published in the California Code of Regulations (see 8 CCR, 22 CCR, and 23 CCR).

The project is not within an airport land use plan or within two miles of a public or public use airport. Therefore, no further discussion is provided for items e.

Discussion of Checklist Answers:

a-b) Standard construction activities would require the use of hazardous materials such as fuels, oils, lubricants, glues, paints and paint thinners, soaps, bleach, and solvents. These are common household and commercial materials routinely used by both businesses and average members of the public. The materials only pose a hazard if they are improperly used, stored, or transported either through upset conditions (e.g. a vehicle accident) or mishandling. In addition to construction use, the operational project would result in the use of common hazardous materials as well, including bleach, solvents, and herbicides. Regulations pertaining to the transport of materials are codified in 49 Code of Federal Regulations 171–180, and transport regulations are enforced and monitored by the California Department of Transportation and by the California Highway Patrol. Specifications for storage on a construction site are contained in various regulations and codes, including the California Code of Regulations, the Uniform Fire Code, and the California Health and Safety Code. These same codes require that all hazardous materials be used and stored in the manner specified on the material packaging. Existing regulations and programs are sufficient to ensure that potential impacts as a result of the use or storage of hazardous materials are reduced to less than significant levels.

c) The project is not located within a ¼-mile of an existing or proposed school, and thus there is no impact with respect to this criterion.

d) The project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5⁴; therefore, no impact will occur.

f) This project is located within an area currently receiving City emergency services and development of the site has been anticipated and incorporated into emergency response plans. As such, the project will cause a less than significant impact to the City's Emergency Response or Management Plans. Furthermore, the project will be required to comply with all local, State and federal requirements for the handling of hazardous materials, which will ensure less-than-significant impacts. These will require the following programs:

- A Risk Management and Prevention Program (RMPP) is required of uses that handle toxic and/or hazardous materials in quantities regulated by the California Health and Safety Code and/or the City.
- Businesses that handle toxic or hazardous materials are required to complete a Hazardous Materials Management Program (HMMP) pursuant to local, State, or federal requirements.

g) The California Department of Forestry and Fire Protection (CAL FIRE) is the state agency responsible for wildland fire protection and management. As part of that task, CAL FIRE maintains maps designating Wildland Fire Hazard Severity zones. The City is not located within a Very High Fire Hazard Severity Zone, and is not in a CAL FIRE responsibility area; fire suppression is entirely within local responsibility. The project site is in an urban area, and therefore would not expose people to any risk from wildland fire. There would be no impact with regard to this criterion.

X. Hydrology and Water Quality

As described in the Open Space and Conservation Element of the City of Roseville General Plan, the City is located within the Pleasant Grove Creek Basin and the Dry Creek Basin. Pleasant Grove Creek and its tributaries drain most of the western and central areas of the City and Dry Creek and its tributaries drain the remainder of the City. Most major stream areas in the City are located within designated open space.

⁴ <http://www.calepa.ca.gov/SiteCleanup/CorteseList/SectionA.htm>

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
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:			X	
i. result in substantial erosion or siltation on or off-site;			X	
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;			X	
iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater systems or provide substantial additional sources of polluted runoff; or			X	
iv. impede or redirect flood flows?				X
d) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
e) In flood hazard, tsunami, or seiches zones, risk release of pollutants due to project inundation?				X

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to hydrology and water quality is based directly on the CEQA Guidelines checklist items a–e listed above. For checklist item a, c (i), d, and e, the Findings of the Implementing Procedures indicate that compliance with the City of Roseville Design/Construction Standards (Resolution 07-107), Urban Stormwater Quality Management and Discharge Control Ordinance (RMC Ch. 14.20), and Stormwater Quality Design Manual (Resolution 16-152) will prevent significant impacts related to water quality or erosion. The standards require preparation of an erosion and sediment control plan for construction activities and includes designs to control pollutants within post-construction urban water runoff. Likewise, it is indicated that the Drainage Fees for the Dry Creek and Pleasant Grove Watersheds (RMC Ch.4.48) and City of Roseville Design/Construction Standards (Resolution 07-107) will prevent significant impacts related to checklist items c (ii) and c (iii). The ordinance and standards require the collection of drainage fees to fund improvements that mitigate potential flooding impacts, and require the design of a water drainage system that will adequately convey anticipated stormwater flows without increasing the rate or amount of surface runoff. These same ordinances and standards prevent impacts related to groundwater (items a and d), because developers are required to treat and detain all stormwater onsite using stormwater swales and other methods which slow flows and preserve infiltration. Finally, it is indicated that compliance with the Flood Damage Prevention Ordinance (RMC Ch. 9.80) will prevent significant impacts related to items c (iv) and e. The Ordinance includes standard requirements for all new construction, including regulation of development with the potential to impede or redirect flood flows, and prohibits development within flood hazard areas. Impacts from tsunamis and seiches were screened out of the analysis (item e) because the project is not located near a water body or other feature that would pose a risk of such an event.

Discussion of Checklist Answers:

a, c (i), d, e) The project will involve the disturbance of on-site soils and the construction of impervious surfaces, such as asphalt paving. Disturbing the soil can allow sediment to be mobilized by rain or wind, and cause displacement into waterways. To address this and other issues, the developer is required to receive approval of a grading permit and/or improvement plants prior to the start of construction. The permit or plans are required to incorporate mitigation measures for dust and erosion control. In addition, the City has a National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit issued by the Central Valley Regional Water Quality Control Board which requires the City to reduce pollutants in stormwater to the maximum extent practicable. The City does this, in part, by means of the City’s 2016 Design/Construction Standards, which require preparation and implementation of a Stormwater Pollution Prevention Plan. All permanent stormwater quality control measures must be designed to comply with the City’s Manual for Stormwater Quality Control Standards for New Development, the City’s 2016 Design/Construction Standards, Urban Stormwater Quality Management and Discharge Control Ordinance, and Stormwater Quality Design Manual. For these reasons, impacts related to water quality are less than significant.

b, d) The project does not involve the installation of groundwater wells. The City maintains wells to supplement surface water supplies during multiple dry years, but the effect of groundwater extraction on the aquifer was addressed in the Water Supply Assessment of the Amoruso Ranch Specific Plan EIR, which included a Citywide water analysis. Although the project site has an existing land use designation of Low Density Residential, it does not have any residential units allocated to the site. Therefore, the City-defined baseline water usage for the site

is 0 acre-feet per year (AFY). The project involves a change in land use to Community Commercial, which would increase water demand for the site by 1.1 AFY. The City’s Environmental Utilities Department determined this increase is not significant and there are sufficient water supplies available to allocate the additional water demand. Project impacts related to groundwater extraction are less than significant. Furthermore, all permanent stormwater quality control measures must be designed to comply with the Stormwater Quality Design Manual, which requires the use of bioswales and other onsite detention and infiltration methods. These standards ensure that stormwater will continue to infiltrate into the groundwater aquifer.

c (ii and iii)) The project has been reviewed by City Engineering staff for conformance with City ordinances and standards. The project includes adequate and appropriate facilities to ensure no net increase in the amount or rate of stormwater runoff from the site, and which will adequately convey stormwater flows.

c (iv) and e) The project has been reviewed by City Engineering staff for conformance with City ordinances and standards. The project is not located within either the Federal Emergency Management Agency floodplain or the City’s Regulatory Floodplain (defined as the floodplain which will result from full buildout of the City). Therefore, the project will not impede or redirect flood flows, nor will it be inundated. The proposed project is located within an area of flat topography and is not near a waterbody or other feature which could cause a seiche or tsunami. There would be no impact with regard to these criterion.

XI. Land Use and Planning

The project site has a General Plan and Specific Plan land use designation of Low Density Residential (LDR). The zoning designation is Single-Family Residential/Development Standards (R1/DS). As mentioned, the WRSP does not have any residential units allocated to Parcel W-20. The site is intended to consist of a landscape gateway feature for the Plan area. Surrounding properties have residential land use and zoning designations, as described in the Environmental Setting section of this Initial Study.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Physically divide an established community?				X
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?				X

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to land use is based directly on the CEQA Guidelines checklist items a–c listed above. Consistency with applicable City General Plan policies, Improvement Standards, and design standards is already required and part of the City’s processing of permits and plans, so these requirements do not appear as mitigation measures. Land use regulations applicable to the site include the City’s General Plan 2035, the Zoning Ordinance, and the WRSP. The WRSP contains general design guidelines and policies for development within the WRSP as a whole.

Discussion of Checklist Answers:

a) The project area has been planned for development, including adequate roads, pedestrian paths, and bicycle paths to provide connections within the community. The project involves frontage improvements including a new driveway and a pedestrian path. As such, the project will not physically divide an established community.

b) The project includes an amendment to the General Plan to change the land use from Low Density Residential (LDR) to Community Commercial (CC), and a Rezone to change the zoning designation from Single-Family Residential/Development Standards (R1/DS) to Community Commercial (CC), in order to facilitate construction of the proposed drive-through coffee shop. The City’s Design Review standards, as well as City-required Conditions of Approval would ensure that the proposed project would be developed in conformance with all applicable land use plans and ordinances, and would not conflict with any agency’s plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. Impacts are less than significant.

XII. Mineral Resources

The Surface Mining and Reclamation Act (SMARA) of 1975 requires the State Geologist to classify land into Mineral Resource Zones (MRZ’s) based on the known or inferred mineral resource potential of that land. The California Division of Mines and Geology (CDMG) was historically responsible for the classification and designation of areas containing—or potentially containing—significant mineral resources, though that responsibility now lies with the California Geological Survey (CGS). CDMG published Open File Report 95-10, which provides the mineral classification map for Placer County. A detailed evaluation of mineral resources has not been conducted within the City limits, but MRZ’s have been identified. There are four broad MRZ categories (MRZ-1 through MRZ-4), and only MRZ-2 represents an area of known significant mineral resources. The City of Roseville General Plan EIR included Exhibit 4.1-3, depicting the location of MRZ’s in the City limits. There is only one small MRZ-2 designation area, located at the far eastern edge of the City.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
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?				X
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?				X

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to mineral resources is based directly on the CEQA Guidelines checklist items a and b listed above.

Discussion of Checklist Answers:

a–b) The project site is not in the area of the City known to include any mineral resources that would be of local, regional, or statewide importance; therefore, the project has no impacts on mineral resources.

XIII. Noise

The project site is currently undeveloped and is surrounded by existing and future residential uses, which typically do not generate substantial noise volumes. The site is located adjacent to Pleasant Grove Boulevard and Upland Drive. According to the City’s General Plan Noise Element, Pleasant Grove Boulevard is identified as a transportation noise source while Upland Drive is not. The project site is within the existing 65 dB L_{dn} noise contour line and the future 2035 70 dB L_{dn} noise contour line of Pleasant Grove Boulevard (City of Roseville General Plan 2035 Noise Element, Figure IX-1 and Figure IX-2). The nearest sensitive receptors are the future residents of the undeveloped High Density Residential parcel located immediately south of the site. The nearest existing residents are located within the residential area to the west of this site, across Upland Drive. These residential uses are also located within the same roadway noise contour lines as the project site. The nearest home is approximately 100 feet west of the site. A six-foot tall masonry sound wall is located along the western side of Upland Drive, behind the landscaping area and sidewalk, for the protection of the residential neighborhood from roadway and other noise.

Would the project result in:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		
b) Generation of excessive ground borne vibration of ground borne noise levels?			X	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X

Thresholds of Significance and Regulatory Setting:

Standards for transportation noise and non-transportation noise affecting existing or proposed land uses are established within the City of Roseville General Plan Noise Element Table IX-1, and these standards are used as the thresholds to determine the significance of impacts related to items a and c. The significance of other noise impacts is based directly on the CEQA Guidelines checklist items b and c listed above. The Findings of the Implementing Procedures indicate that compliance with the City Noise Regulation (RMC Ch. 9.24) will prevent significant non-transportation noise as it relates to items a and b. The Ordinance establishes noise exposure standards that protect noise-sensitive receptors from a variety of noise sources, including non-transportation/fixed noise, amplified sound, industrial noise, and events on public property. The project is not within an airport land use plan, within two miles of a public or public use airport and there are also no private airstrips in the vicinity of the project area. Therefore, item c has been ruled out from further analysis.

Discussion of Checklist Answers:

a) The overall noise goal for the City is to protect the health and welfare of the community by promoting community development that is compatible with noise level criteria. The Noise Element identifies noise level standards for transportation-related noise sources. For most noise-sensitive land uses (such as residential uses), a 60 dB Ldn exterior noise level standard and 45 dB Ldn interior noise level standard is established. The proposed project is a drive-through coffee shop, which is considered a commercial use and not a noise-sensitive land use.

Residential uses are considered sensitive receptors and as mentioned, the project site is immediately adjacent to future residential uses to the south. The site is also adjacent to existing residential uses that are located to the west across Upland Drive and to the north across Pleasant Grove Boulevard. Table 1 of the City’s Noise Ordinance (Chapter 9.24) identifies the sound limits for sensitive receptors for non-transportation and fixed noise sources. The table is included as Figure 3 below. As identified, fixed noise sources are not to exceed 50 dBA L_{eq} and 70 dBA L_{max} during daytime hours (7:00 a.m. to 10:00 p.m.) and 45 dBA L_{eq} and 65 dBA L_{max} during nighttime hours (10:00 p.m. to 7:00 a.m.) as measured at the property line of noise sensitive land uses. These standards apply to permanent increases in noise, not to construction noise, which is instead regulated by the City’s Health and Safety Ordinance and is evaluated within checklist item b.

Figure 3: Noise Ordinance Table 1

Sound Level Descriptor	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
Hourly L_{eq} , dB	50	45
Maximum level, dB	70	65

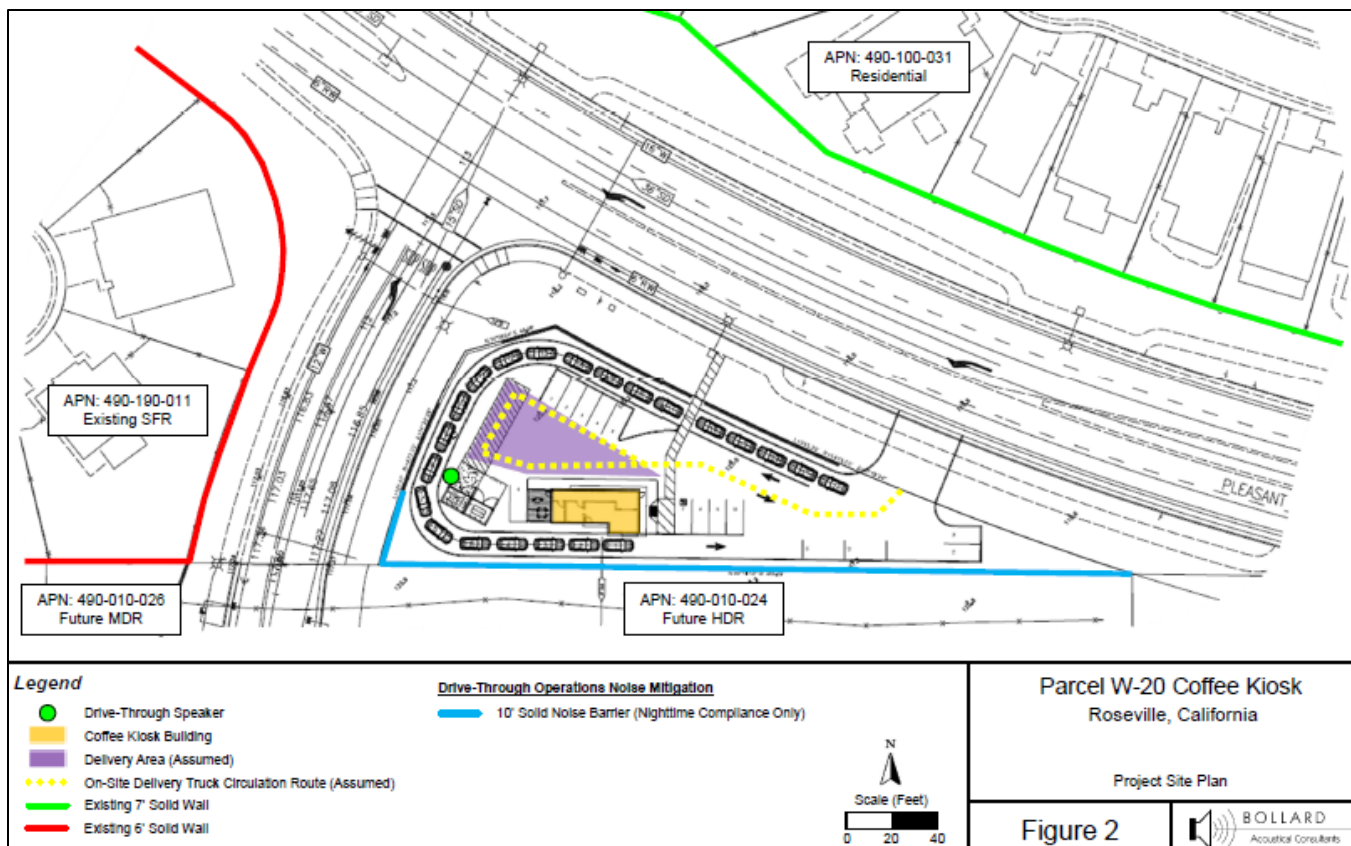
An Environmental Noise Assessment (ENA) was prepared for the project by Bollard Acoustical Consultants, Inc. (BAC) to evaluate noise levels associated with project operations (see Attachment 3). The assessment identifies the following as the primary noise sources of the project: 1.) drive-through operations (e.g., drive-through menu speaker board, post and vehicle idling, passbys); 2.) delivery truck loading area activities; 3.) delivery truck on-site circulation; and 4.) rooftop mechanical equipment (HVAC). The assessment concluded that noise from drive-through operations could potentially exceed the applicable noise level limits at the nearest residential uses.

As such, noise mitigation measures are required in order to comply with the General Plan noise standards, and to ensure impacts are less than significant. Noise from delivery truck loading area activities, delivery truck on-site circulation, and rooftop mechanical equipment is not expected to exceed the noise limits, provided that the requirements identified in WRSP EIR Mitigation Measure (MM) 4.5-3 are met. Each of these noise sources and related mitigation measures are addressed separately, below.

Drive-Through Operations

The ENA evaluated expected noise levels from the use of an amplified speaker menu board in the drive-through. The location of the menu board is shown in Figure 4 below. The assessment concluded that the project drive-through operations are predicted to satisfy the applicable daytime hourly average and maximum noise level standards at the nearest existing and future residential property lines. However, noise levels from drive-through operations are predicted to exceed the nighttime hourly average noise level standards at the future High Density Residential property line to the south, if the hours of operation extend into nighttime hours (10:00 p.m. to 7:00 a.m.). Therefore, in order to avoid exceeding General Plan noise standards, **Mitigation Measure NOI-1** is included which requires either the construction of a 10-foot solid noise barrier along the southern project property boundary (as shown in blue on Figure 4), or to limit all drive-through operations to daytime hours only (7:00 a.m. to 10:00 p.m.). With mitigation, impacts related to noise will be less than significant.

Figure 4: Environmental Noise Assessment Figure 2



Truck Delivery Activities

The primary noise sources associated with delivery activities are trucks stopping (air brakes), trucks backing into position (back-up alarms), and pulling away from the loading/unloading area (revving engines). The project site plan does not propose a loading dock. For purposes of the noise analysis, it was assumed that deliveries would

occur on the north side of the building, as illustrated in Figure 4 above. Pursuant to WRSP EIR MM 4.5-3(a)(1), commercial truck deliveries shall be limited to daytime hours (7:00 a.m. to 10:00 p.m.). Given this, the ENA compared truck delivery activity noise to daytime noise level standards only. The assessment concluded that project truck delivery activity noise exposure is predicted to satisfy the applicable City of Roseville General Plan daytime hourly average (L_{eq}) and maximum (L_{max}) noise level standards at the nearest existing and future residential uses. As a result, additional noise mitigation measures are not warranted for this aspect of the project.

On-Site Delivery Truck Circulation

The project on-site delivery truck circulation noise exposure is predicted to satisfy the applicable daytime hourly average (L_{eq}) and maximum (L_{max}) noise level standards at the nearest existing and future residential uses. In addition, project on-site delivery truck circulation noise levels are also predicted to satisfy the hourly average and maximum noise level standards identified in MM 4.5-3 of the WRSP EIR Mitigation Monitoring Program. As a result, additional noise mitigation measures are not warranted for this aspect of the project.

Mechanical Equipment (HVAC)

Pursuant to WRSP EIR MM 4.5-3(b), roof-top HVAC equipment shall be oriented away from residential areas and systems shall not produce noise levels that exceed 50 dB at a distance of 25 feet. In addition, rooftop parapets shall block line-of-sight of HVAC equipment from noise-sensitive uses. Provided that the project complies with these requirements, the ENA concluded that additional noise mitigation measures are not warranted for this aspect of the project.

b) Surrounding uses may experience short-term increases in groundborne vibration, groundborne noise, and airborne noise levels during construction. However, these increases would only occur for a short period of time. When conducted during daytime hours, construction activities are exempt from Noise Ordinance standards, but the standards do apply to construction occurring during nighttime hours. While the noise generated may be a minor nuisance, the City Noise Regulation standards are designed to ensure that impacts are not unduly intrusive. Based on this, the impact is less than significant.

XIV. Population and Housing

The project site is located within the City’s West Roseville Specific Plan (WRSP) area. The site has a zoning designation of Single-Family Residential/Development Standards (R1/DS) and a land use designation of Low Density Residential (LDR). The WRSP includes unit allocations and population projections for the Plan Area. The WRSP does not have any residential units allocated to the project site. Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
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)?			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to population and housing is based directly on the CEQA Guidelines checklist items a–c listed above.

Discussion of Checklist Answers:

a) The CEQA Guidelines identify several ways in which a project could have growth-inducing impacts (Public Resources Code Section 15126.2), either directly or indirectly. Growth-inducement may be the result of fostering economic growth, fostering population growth, providing new housing, or removing barriers to growth. Growth inducement may be detrimental, beneficial, or of no impact or significance under CEQA. An impact is only deemed to occur when it directly or indirectly affects the ability of agencies to provide needed public services, or if it can be shown that the growth will significantly affect the environment in some other way.

The project will change the zoning on the site and introduce a small, locally-serving retail use. The previous zoning and WRSP anticipated low density residential uses on the site, which would have had some level of growth inducing impacts. Therefore, while the project in question will induce some level of growth, this growth was already identified and its effects disclosed and mitigated within the West Roseville Specific Plan EIR. The project will not result in additional infrastructure that will lead to additional growth nor will the project negatively affect the City’s ability to provide public services. Therefore, the impact of the project is less than significant.

b) The project site is currently vacant and no housing exists on the project site. There would be no impact with respect to this criterion.

XV. Public Services

Fire protection, police protection, park services, and library services are provided by the City. The project is located within the Roseville Elementary School District and the Roseville Joint Unified High School District.

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 government 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 following public services:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Fire protection?			X	
b) Police protection?			X	
c) Schools?			X	
d) Parks?			X	
e) Other public facilities?			X	

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to public services is based directly on the CEQA Guidelines checklist items a–e listed above. The EIR for the Amoruso Ranch Specific Plan, which updated Citywide analyses, addressed the level of public services which would need to be provided in order to serve planned growth in the community. Development Agreements and other conditions have been adopted in all proposed growth areas of the City which identify the physical facilities needed to serve growth, and the funding needed to provide for the construction and operation of those facilities and services. Although the project involves a General Plan Amendment, the City's Fire, Police, Parks, and Utilities Departments have all reviewed the project plans and have not identified any significant impacts to City services. In addition, the project has been routed to the various public service agencies, both internal and external, to ensure that the project meets the agencies' design standards (where applicable) and to provide an opportunity to recommend appropriate conditions of approval.

a) Existing City codes and regulations require adequate water pressure in the water lines, and construction must comply with the Uniform Fire and Building Codes used by the City of Roseville. Additionally, the applicant is required to pay a fire service construction tax, which is used for purchasing capital facilities for the Fire Department. Existing codes, regulations, funding agreements, and facilities plans are sufficient to ensure less than significant impacts.

b) Sales taxes and property taxes resulting from development will add revenue to the General Fund, which provides funding for police services. Existing codes, regulations, funding agreements, and facilities plans are sufficient to ensure less than significant impacts.

c) Project applicants are required to pay school impact fees at a rate determined by the local school districts. School fees will be collected prior to the issuance of building permits, consistent with City requirements. Existing codes, regulations, funding agreements, and facilities plans are sufficient to ensure less than significant impacts.

d) Future park and recreation sites and facilities have already been identified as part of the Specific Plan process. Existing codes, regulations, funding agreements, and facilities plans are sufficient to ensure less than significant impacts.

e) The City charges fees for end-users for other services, such as garbage and greenwaste collection, in order to fund those services. Existing codes, regulations, funding agreements, and facilities plans are sufficient to ensure less than significant impacts.

XVI. Recreation

There are no parks or recreation facilities immediately adjacent to the project site. The nearest developed recreation areas are Robert P. "Bob" Mahan Park and Nela Luken Park at the Village Center, both located approximately one (1) mile northwest of the site. The project is also located within 0.3-mile of land to the southwest that is designated as Parks and Recreation according to the General Plan and Sierra Vista Specific Plan.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of the facility would occur or be accelerated?			X	
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?				X

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to recreation services is based directly on the CEQA Guidelines checklist items a–b listed above.

Discussion of Checklist Answers:

a) The WRSP EIR addressed the level of park services—including new construction, maintenance, and operations—which would need to be provided in order to serve planned growth in the community. The project has the potential to increase the use of existing neighborhood and recreational facilities, but the increase is not anticipated to be substantial or result in accelerated physical deterioration of existing recreational facilities. Existing codes, regulations, funding agreements, and facilities plans are sufficient to ensure less than significant impacts.

b) Park sites and other recreational facilities were identified within the WRSP, and the plan-level impacts of developing those facilities were addressed within the Final EIR for the Specific Plan. The project does not include recreational facilities nor will it require additional recreational facilities. Thus, the project will not cause any unforeseen or new impacts related to the construction or expansion of recreational facilities.

XVII. Transportation

The project site is located at the southeast corner of the Pleasant Grove Boulevard and Upland Drive intersection, approximately 750 feet west of Fiddyment Road. Pleasant Grove Boulevard, along the north of the site, is a four-lane roadway that is considered a minor arterial within the vicinity of the project site. Upland Drive is a two-lane collector roadway located to the west. Upland Drive will eventually extend south into the Sierra Vista Specific Plan area, but is currently a stub street ending approximately 180 feet south of Pleasant Grove Boulevard. The Pleasant Grove Boulevard/Upland Drive intersection is side-street stop controlled and includes left-turn lanes in the northbound and westbound directions. The intersection is planned for signalization in the future. Sidewalks and Class II bike lanes are provided on both sides of the roadways within the project site vicinity.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X	
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?			X	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d) Result in inadequate emergency access?			X	

Thresholds of Significance and Regulatory Setting:

CEQA Guidelines Section 15064.3 indicates that a project’s effect on automobile delay cannot be considered a significant impact, and directs transportation system analysis to focus on vehicle miles traveled (VMT), per checklist item b. However, the CEQA Guidelines also include consistency with a program, plan, or policy addressing transportation systems as an area of potential environmental effects (checklist item a). The City has adopted the following plans, ordinances, or policies applicable to this checklist item: Pedestrian Master Plan, Bicycle Master Plan, Short-Range Transit Plan, and General Plan Circulation Element. The project is evaluated for consistency with these plans and the policies contained within them, which includes an analysis of delay as a potential policy impact. The Circulation Element of the General Plan establishes Level of Service C or better as an acceptable operating condition at all signalized intersections during a.m. and p.m. peak hours. Exceptions to this policy may be made by the City Council, but a minimum of 70% of all signalized intersections must maintain LOS C. The Findings of the Implementing Procedures indicate that compliance with the Traffic Mitigation Fee (RMC Ch. 4.44) will fund roadway projects and improvements necessary to maintain the City’s Level of Service standards for projects consistent with the General Plan and related Specific Plan. An existing plus project conditions (short-term) traffic impact study may be required for projects with unique trip generation or distribution characteristics, in areas of local traffic constraints, or to study the proposed project access. A cumulative plus project conditions (long-term) study is required if a project is inconsistent with the General Plan or Specific Plan and would generate more than 50 p.m. peak-hour trips. The guidelines for traffic study preparation are found in the City of Roseville Design and Construction Standards–Section 4.

For checklist item b, the CEQA Guidelines Section 15064.3 establishes a detailed process for evaluating the significance of transportation impacts. In accordance with this section, the analysis must focus on the generation

of VMT. Projects within one-half mile of either an existing major transit stop⁵ or a stop along an existing high quality transit corridor⁶ should be presumed to have less than significant impacts, as should any project which will decrease VMT when compared with the existing conditions. VMT may be analyzed qualitatively if existing models or methods are not available to estimate VMT for a particular project; this will generally be appropriate for discussions of construction traffic VMT.

Impacts with regard to items c and d are assessed based on the expert judgment of the City Engineer and City Fire Department, as based upon facts and consistency with the City's Design and Construction Standards.

Discussion of Checklist Answers:

a) The City of Roseville has adopted a Pedestrian Master Plan, Bicycle Master Plan, and Short-Range Transit Plan. The project was reviewed for consistency with these documents. All facilities identified in these plans for this area are already installed, and the project does not impact or conflict with these planning documents.

Fehr & Peers, a transportation engineering consultant, prepared a traffic study for the proposed project (Attachment 4), which included a trip generation estimate. Pass-by trips are trips already on the network that are diverted to and from a commercial or retail land use, and therefore would not be considered as new trips generated by the project. Pass-by trips were estimated from data presented in the *Trip Generation Handbook, 3rd Edition* (Institute of Transportation Engineers, 2017). After accounting for pass-by trip reductions, the traffic study estimated the project would generate an estimated 54 net new external vehicle trips during the a.m. peak hour and 48 net new vehicle trips during the p.m. peak hour.

The traffic study evaluated the effects of the project on LOS under both Existing Plus Project and Cumulative Plus Project conditions. The Existing Plus Project scenario considers the development of the project without any additional changes to the surrounding land use and transportation characteristics. The Cumulative Plus Project scenarios considers the development of the project alongside land use and transportation system changes through 2035 as identified in the City of Roseville General Plan. This scenario includes the extension of Upland Drive south into the Sierra Vista Specific Plan area as well as the signalization of the Pleasant Grove Boulevard/Upland Drive intersection. The study concluded the Pleasant Grove Boulevard/Upland Drive intersection would operate at LOS C or better during the a.m. and p.m. peak hours under both Existing Plus Project and Cumulative Plus Project conditions.

The study also evaluated the drive-through queue storage using queue observations at comparable drive-through coffee businesses, such as the existing Dutch Bros locations in Roseville, located at 1225 Baseline Road and 715 Sunrise Avenue. The study determined the proposed drive-through lane would provide 380 feet of storage, for up to 19 vehicles, when measured at the drive-through lane entry point and the service window. The maximum drive-through queue observed at the Sunrise Avenue Dutch Bros store was 13 vehicles and the maximum drive-through queue observed at the Baseline Road Dutch Bros store was 21 vehicles. Therefore, if the project would be expected to generate levels of customer activity (and on-site employee order fulfillment efficiency) similar to the Sunrise Avenue Dutch Bros store, the project would provide sufficient drive-through storage to accommodate the maximum queue. However, if the project would be expected to generate levels of customer activity similar to the Baseline Road Dutch Bros store, the maximum drive-through queue would exceed the available storage by two vehicles.

⁵ A site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. (Public Resources Code Section 21064.3)

⁶ A corridor with fixed route bus service at service intervals of 15 minutes or less during peak commute hours.

Vehicles that exceed the drive-through queue storage would impede the path of travel for vehicles entering the project site. Fehr & Peers notes that the Baseline Road Dutch Bros store exceeded 19 vehicles (the available drive-through storage for the proposed project) for only two five-minute intervals during the entirety of the 7:00 a.m. to 7:00 p.m. observation period. This represents just over one percent of the 145 five-minute intervals recorded during the maximum drive-through queue observations. Therefore, while it is conceivable that the maximum drive-through queue would exceed the available drive-through storage for the proposed project, this condition would likely occur only during brief periods of heavy visitation and would not persist for extended periods of time. Moreover, sufficient space is available such that a maximum drive-through queue of 21 vehicles would not spill back into travel lanes on Pleasant Grove Boulevard.

The traffic study determined the following modifications to the project are needed to improve project access and on-site circulation design:

1. Construct a right-turn deceleration lane on eastbound Pleasant Grove Boulevard approaching the project driveway that is 135 feet in length plus a 60-foot taper.
2. Construct the driveway as a Type A-7 driveway (refer to Detail ST-22) with a corner radius of 25 feet to accommodate large truck maneuvers in/out of the project site.
3. Widen the project driveway to a width of 40 feet and provide two inbound lanes and one outbound lane. Install “Drive Thru” pavement markings in the westerly inbound lane.
4. Maintain the existing median landscaping on the west leg of the Pleasant Grove Boulevard/Upland Drive intersection and routinely prune the existing trees and vegetation to maintain a six-inch to six-foot clear line of sight within the green area shown on Figure 4 of Attachment 4.
5. Eliminate parking stalls #10, #11, and #12 shown on the project site plan.

These modifications have been incorporated into the preliminary site plan (see Figure 2 in the Project Description section of this Initial Study). Therefore, based on the traffic study and the evaluation above, impacts to traffic and level of service have been determined to be less than significant.

b) Traffic analyses focus on the number of trips traveling in specified areas during peak periods, in order to quantify impacts as specific intersections. However, there is no direct relationship between the number of trips and the amount of VMT generated by a use. Projects which substantially increase trips to a specific area may in fact decrease VMT in the City. As an example, if a new grocery store is added to an area, customers who go to that store were already going to a grocery store elsewhere, and are most likely to choose the new store because it is closer to home or on their way to another location (e.g. work). So while the store would generate additional new trips, it would lower Citywide VMT. Unless a project includes unique characteristics, non-residential projects do not increase VMT; they divert existing trips into a similar or more efficient pathway.

The proposed project is a 910-square-foot drive-through coffee shop. The project does not include any unique characteristics which would draw in regional traffic, or which would prompt longer trips. The project would locate services and employment in proximity to existing developed areas. As referenced in the traffic study prepared by Fehr & Peers, the Governor’s Office of Planning and Research (OPR) produced the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018), which generally describes retail development including stores less than 50,000 square feet as locally-serving. In the context of CEQA, it concludes that locally-serving retail may be found to cause less-than-significant transportation impacts. The proposed project falls well below this building size threshold. Moreover, given the prevalence of coffee stores (drive-through and walk-in) throughout the City of Roseville and the broad distribution of these coffee stores throughout the City’s residential and employment areas, it is expected that the project would similarly cater to local residents and employees and function as a locally-serving establishment. For these reasons, the project is presumed to have a less-than-

significant impact to the transportation system on the basis of project-generated VMT, pursuant to guidance provided in the *Technical Advisory*.

c-d) The project has been reviewed by the City Engineering and City Fire Department staff, and has been found to be consistent with the City’s Design Standards. Furthermore, standard conditions of approval added to all City project require compliance with Fire Codes and other design standards. Compliance with existing regulations ensure that impacts are less than significant.

XVIII. Tribal Cultural Resources

As described within the Open Space and Conservation Element of the City of Roseville General Plan, the Roseville region was within the territory of the Nisenan (also Southern Maidu or Valley Maidu). Two large permanent Nisenan habitation sites have been identified and protected within the City’s open space (in Maidu Park). Numerous smaller cultural resources, such as midden deposits and bedrock mortars, have also been recorded in the City. A majority of documented sites within the City are located in areas designated for open space uses.

Would the project cause a substantial adverse change in the significance of a Tribal Cultural Resource as 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:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
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)?			X	
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 Resources Code Section 5024.1 the lead agency shall consider the significance of the resource to a California Native American tribe.		X		

Thresholds of Significance and Regulatory Setting:

In addition to archeological resources, tribal cultural resources are also given particular treatment. Tribal cultural resources are defined in Public Resources Code Section 21074, as either 1) a site, feature, place, geographically-defined cultural landscape, sacred place, or object with cultural value to a California Native American Tribe, that is listed or eligible for listing on the California Register or Historical Resources, or on a local register of historical resources or as 2) a resource determined by the lead agency, supported by substantial evidence, to be significant according to the historical register criteria in Public Resources Code section 5024.1(c), and considering the significance of the resource to a California Native American Tribe.

Discussion of Checklist Answers:

a) The WRSP EIR included a historic and cultural resources study, which concluded there were no listed or eligible sites documented in the project area. However, the WRSP EIR includes standard mitigation measures which are designed to reduce impacts to any previously undiscovered resources should any be found on site. Language included in the measure requires an immediate cessation of work, and the requirement to contact the appropriate agencies to address the resource before work can resume. The project will not result in any new impacts beyond those already discussed and disclosed in the WRSP EIR; therefore, project-specific impacts are less than significant.

b) Notice of the proposed project was mailed to tribes which had requested such notice pursuant to Assembly Bill 52 (AB 52) and Senate Bill 18 (SB 18) on September 1, 2020. No request for consultation was received within the AB 52 30-day consultation period and the SB 18 90-day consultation period. As discussed in item a, above, no resources are known to occur in the area. However, standard mitigation measures apply which are designed to reduce impacts to resources, should any be found on-site. The measure requires an immediate cessation of work, and the requirement to contact the appropriate agencies to address the resource before work can resume. The project will not result in any new impacts beyond those already discussed and disclosed in the WRSP EIR; therefore, project-specific impacts are less than significant.

XIX. Utilities and Service Systems

Water and sewer services will be provided by the City of Roseville. The developer will be responsible for extending new lines onto the site in order to serve the project. Storm water will be collected on-site and transferred via the existing storm drain system into an off-site storm drain system. Solid waste will be collected by the City of Roseville's Refuse Department. The City of Roseville will provide electric service to the site, while natural gas will be provided by PG&E. Comcast will provide cable. The project has been reviewed by the City's Engineering Division, Environmental Utilities, Roseville Electric and PG&E. Adequate services are available for the project.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c) Result in a determination by the wastewater treatment provider which serves the project that it has adequate capacity to serve the project's projected demand in addition of the provider's existing commitments?			X	
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?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to utilities and service systems is based directly on the CEQA Guidelines checklist items a–g listed above.

Discussion of Checklist Answers:

a) The major utility infrastructure to serve this area is already installed, which includes a looped sewer line and looped water line system in the streets surrounding the site, and stormwater lines. Minor additional infrastructure will be constructed within the project site to tie the project into the major systems, but these facilities will be constructed in locations where site development is already occurring as part of the overall project; there are no additional substantial impacts specific or particular to the minor infrastructure improvements.

b) The City of Roseville 2015 Urban Water Management Plan (UWMP), adopted May 2016, estimates water demand and supply for the City through the year 2040, based on existing land use designations and population projections. In addition, the Amoruso Ranch Water Supply Assessment (AR WSA, Appendix E of the Amoruso Ranch FEIR), dated May 2016, estimates water demand and supply for ultimate General Plan buildout. The UWMP indicates that existing water supply sources are sufficient to meet all near term needs, estimating an annual water demand of 45,475 acre-feet per year (AFY) by the year 2020 and existing surface and recycled water supplies in the amount of 70,421 AFY. The AR WSA estimates a Citywide buildout demand of 64,370 AFY when including recycled water, and of 59,657 AFY of potable water. The AR WSA indicates that surface water supply is sufficient to meet demand during normal rainfall years, but is insufficient during single- and multiple-dry years. However, the City's UWMP establishes mandatory water conservation measures and the use of groundwater to offset reductions in surface water supplies. Both the UWMP and AR WSA indicate that these measures, in combination with additional purchased water sources, will ensure that supply meets projected demand. The project involves a change in land use from Low Density Residential to Community Commercial, which would increase water demand for the site by 1.1 AFY. The City's Environmental Utilities Department determined this to be a de minimis amount of water and there are sufficient water supplies available to allocate the additional water demand; the project would not require new or expanded water supply entitlements.

c) The proposed project would be served by the Pleasant Grove Wastewater Treatment Plant (PGWWTP). The Central Valley Regional Water Quality Control Board (RWQCB) regulates water quality and quantity of effluent discharged from the City's wastewater treatment facilities. The Pleasant Grove WWTP has the capacity to treat 12 million gallons per day (mgd) and is currently treating 7.0 mgd. The volume of wastewater generated by the proposed project could be accommodated by the facility; the proposed project will not contribute to an exceedance of applicable wastewater treatment requirements. The impact would be less than significant.

d,e) The Western Placer Waste Management Authority is the regional agency handling recycling and waste disposal for Roseville and surrounding areas. The regional waste facilities include a Material Recovery Facility (MRF) and the Western Regional Sanitary Landfill (WRSL). Currently, the WRSL is permitted to accept up to 1,900 tons of municipal solid waste per day. According to the solid waste analysis of the Amoruso Ranch Specific Plan FEIR, under current projected development conditions the WRSL has a projected lifespan extending through 2058. The project is consistent with the existing land use designation, and therefore there is sufficient existing capacity to serve the proposed project. Though the project will contribute incrementally to an eventual need to find other means of waste disposal, this impact of City buildout has already been disclosed and mitigation applied as part of each Specific Plan the City has approved, including the most recent Amoruso Ranch Specific Plan. All residences and business in the City pay fees for solid waste collection, a portion of which is collected to fund eventual solid waste disposal expansion. The project will not result in any new impacts associated with major infrastructure. Environmental Utilities staff has reviewed the project for consistency with policies, codes, and regulations related to waste disposal and waste reduction regulations and policies and has found that the project design is in compliance.

XX. Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				X
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?				X
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?				X
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?				X

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to utilities and service systems is based directly on the CEQA Guidelines checklist items a–d listed above. The California Department of Forestry and Fire Protection (CAL FIRE) is the state agency responsible for wildland fire protection and management. As part of that task, CAL FIRE maintains maps designating Wildland Fire Hazard Severity zones. The City is not located within a Very High Fire Hazard Severity Zone, and is not in a CAL FIRE responsibility area; fire suppression is entirely within local responsibility.

Discussion of Checklist Answers:

a–d) Checklist questions a–d above do not apply, because the project site is not within a Very High Fire Hazard Severity Zone and is not in a CAL FIRE responsibility area.

XXI. Mandatory Findings of Significance

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
e) 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 an endangered, threatened or rare species, or eliminate important examples of the major periods of California history or prehistory?			X	
f) Does the project have impacts which 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.)			X	
g) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

Significance Criteria and Regulatory Setting:

The significance of impacts related to mandatory findings of significance is based directly on the CEQA Guidelines checklist items a–c listed above.

Discussion of Checklist Answers:

a–c) Long term environmental goals are not impacted by the proposed project. The cumulative impacts do not deviate beyond what was contemplated in the WRSP EIR, and mitigation measures have already been incorporated. With implementation of the City’s Mitigating Ordinances, Guidelines, and Standards and best

management practices, mitigation measures described in this chapter, and permit conditions, the proposed project will not have a significant impact on the habitat of any plant or animal species. Based on the foregoing, the proposed project does not have the potential to degrade the quality of the environment, substantially reduce the habitat of any wildlife species, or create adverse effects on human beings.

ENVIRONMENTAL DETERMINATION:

*In reviewing the site specific information provided for this project and acting as Lead Agency, the City of Roseville, Development Services Department, Planning Division has analyzed the potential environmental impacts created by this project and determined that with mitigation the impacts are less than significant. As demonstrated in the initial study checklist, there are no “project specific significant effects which are peculiar to the project or site” that cannot be reduced to less than significant effects through mitigation (CEQA Section 15183) and therefore an EIR is **not** required. Therefore, **on the basis of the foregoing initial study:***

[X] I find that the proposed project COULD, but with mitigation agreed to by the applicant, clearly will not have a significant effect on the environment and a *MITIGATED NEGATIVE DECLARATION* has been prepared.

Initial Study Prepared by:

Kinarik Shallow

Kinarik Shallow, Associate Planner
City of Roseville, Development Services – Planning Division

Attachments:

1. Mitigation Monitoring & Reporting Program
2. CalEEMod Results
3. Environmental Noise Assessment, prepared by Bollard Acoustical Consultants
4. Traffic Study, prepared by Fehr & Peers



MITIGATION MONITORING AND REPORTING PROGRAM

Project Title/File Number:	WRSP PCL W-20 – Coffee Shack; File #PL20-0142
Project Location:	1875 Pleasant Grove Boulevard, Roseville, Placer County, CA; APN 017-152-018-000
Project Description:	The proposed project is a 910-square-foot drive-through coffee kiosk with associated parking and landscaping. The project entitlements include a General Plan Amendment and Specific Plan Amendment to modify the land use from Low Density Residential (LDR) to Community Commercial (CC), a Rezone from Single-Family Residential/Development Standards (R1/DS) to Community Commercial (CC), a Development Agreement Amendment to reflect the land use change, a Conditional Use Permit to allow a drive-through use contiguous to a residential zoned parcel, and a Design Review Permit to approve the building architecture and site design.
Environmental Document	Mitigated Negative Declaration
Project Applicant:	David Cobbs, Baker Williams Engineering Group
Property Owner:	Chris Winter, Pulte Home Company, LLC
Lead Agency Contact Person:	Kinarik Shallow, Associate Planner; Phone (916) 746-1309

Section 21081.6 of the California Public Resources Code requires public agencies to "adopt a reporting and monitoring program for the changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment." This Mitigation Monitoring and Reporting Program has been adopted for the purpose of avoiding environmental impacts

MONITORING PROCESS: Existing monitoring mechanisms are in place that assist the City of Roseville in meeting the intent of CEQA. These existing monitoring mechanisms eliminate the need to develop new monitoring processes for each mitigation measure. These mechanisms include grading plan review and approval, improvement/building plan review and approval and on-site inspections by City Departments. Given that these monitoring processes are requirements of the project, they are not included in the mitigation monitoring program.

It shall be the responsibility of the project applicant/owner to provide written notification to the City using the Mitigation Verification Cover Sheet and Forms, in a timely manner, of the completion of each Mitigation Measure as identified on the following pages. The City will verify that the project is in compliance with the adopted Mitigation Monitoring and Reporting Program. Any non-compliance will be reported by the City to the applicant/owner, and it shall be the project applicant's/owner's responsibility to rectify the situation by bringing the project into compliance. The purpose of this program is to ensure diligent and good faith compliance with the Mitigation Measures which have been adopted as part of the project.

TABLE OF MITIGATION MEASURES

Mitigation Measure	Implementation	Timing	Reviewing Party	Documents to be Submitted to City	Staff Use Only
<p>BIO-1: Avoid nesting sites</p> <p>To ensure that fully protected bird and raptor species are not injured or disturbed by construction in the vicinity of nesting habitat, the project applicant shall implement the following measures:</p> <p>(a) When feasible, all tree removal shall occur between August 30 and February 15 to avoid the breeding season of any raptor species that could be using the area, and to discourage hawks from nesting in the vicinity of an upcoming construction area. This period may be modified with the authorization of the DFG; or</p> <p>(b) Prior to the beginning of mass grading, including grading for major infrastructure improvements, during the period between February 15 and August 30, all trees and potential burrowing owl habitat within 350 feet of any grading or earthmoving activity shall be surveyed for active raptor nests or burrows by a qualified biologist no more than 30 days prior to disturbance. If active raptor nests or burrows are found, and the site is within 350 feet of potential construction activity, a fence shall be erected around the tree or burrow(s) at a distance of up to 350 feet, depending on the species, from the edge of the canopy to prevent construction disturbance and intrusions on the nest area. The appropriate buffer shall be determined by the City in consultation with CDFG.</p> <p>(c) No construction vehicles shall be permitted within restricted areas (i.e., raptor protection zones), unless directly related to the management or protection of the legally protected species.</p> <p>(d) In the event that a nest is abandoned, despite efforts to minimize disturbance, and if the nestlings are still alive, the developer shall contact CDFG and, subject to CDFG approval, fund the recovery and hacking (controlled release of captive reared young) of the nestling(s).</p> <p>(e) If a legally protected species nest is located in a tree designated for removal, the removal shall be deferred until after August 30th, or until the adults and young of the year are no longer dependent on the nest site as determined by a qualified biologist.</p> <p>(f) The project applicant, in consultation with the CDFG, shall conduct a pre-construction survey within the phases of the project site that are scheduled for construction activities. The survey shall be conducted by a qualified biologist to determine if burrowing owls are occupying the project site. The survey shall be conducted no more than three weeks prior to grading of the project site.</p> <p>If the above survey does not identify burrowing owls on the project site, then no further mitigation would be required. However, should burrowing owls be found on the project site, the following measures shall be required:</p> <p>(g) The applicant shall avoid all potential burrowing owl burrows that may be disturbed by project construction during the breeding season between February 15 and August 30 (the period when nest burrows are typically occupied by adults with eggs or young). Avoidance shall include the establishment of a 350-foot diameter non-disturbance buffer zone around any occupied burrows. The buffer zone shall be delineated by highly visible temporary construction fencing. Disturbance of any occupied burrows shall only occur outside of the breeding season (August 30 through February 15).</p> <p>Based on approval by the CDFG, preconstruction and nonbreeding season exclusion measures may be implemented to preclude burrowing owl occupation of the project site prior to project-related disturbance (such as grading). Burrowing owls may be passively excluded from burrows in the construction area by placing one-way doors in the burrows according to current CDFG protocol. The one-way doors must be in place for a minimum of three days. All burrows that may be occupied by burrowing owls, regardless of whether they exhibit signs of occupation, must be cleared. Burrows that have been cleared through the use of the one-way doors shall then be closed or backfilled to prevent owls from entering the burrow. The one-way doors shall not be used more than two weeks before construction to ensure that owls do not recolonize the area of construction.</p>	<p>Results of preconstruction surveys shall be submitted prior to the issuance of a grading permit or Improvement Plans. Applicable construction restrictions shall be reflected within plans. The applicants shall prepare annual reports on the status and success of mitigation and shall submit these reports to USFWS and CDFG. The applicants shall coordinate with USFWS and CDFG to modify as necessary any mitigation plans in an effort to attain mitigation success.</p>	<p><i>Pre-Construction and Construction:</i> Surveys required prior to construction. If surveys are positive for birds, then remainder of mitigation steps are required prior to construction.</p> <p>Add as note on Improvement Plans.</p>	<p>Engineering</p>	<p>Nesting bird surveys</p>	

<p>NOI-1: Commercial Noise Control</p> <p>For all commercial uses within 150 feet of residential uses, implement the following or equally effective measures:</p> <p>(a) For commercial loading docks and on-site truck circulation areas that are planned to be within 150 feet of sensitive receptors (including backyards), the following measures shall be implemented:</p> <p>(1) Loading docks and on-site truck circulation routes shall be designed to ensure that noise levels do not exceed 70 dB Lmax or 50 dB hourly Leq at the nearest residence. An acoustic analysis shall demonstrate that the loading area design, including any noise attenuation features (e.g., covering, sound walls, orientation) would be adequate to achieve this standard; and,</p> <p>(2) Deliveries shall generally be limited to the hours between 7:00 A.M. and 10:00 P.M.</p> <p>(b) For all commercial buildings, roof-top HVAC shall be oriented away from residential areas and systems shall not produce noise levels that exceed 50 dB at a distance of 25 feet. In addition, roof-top parapets shall block line-of-sight from noise-sensitive uses to HVAC equipment.</p> <p>(c) Setbacks or enhanced barriers (e.g., 8 feet tall) as needed to achieve City standards.</p> <p>(d) In order to satisfy the applicable City of Roseville General Plan nighttime hourly average noise level standards, one of the following specific noise mitigation measures are recommended:</p> <ol style="list-style-type: none"> 1. The construction of a 10' solid noise barrier along the southern project property boundary. The solid barrier could consist of either masonry or precast concrete panels. <p>OR</p> <ol style="list-style-type: none"> 2. Limit drive-through operations to the hours between 7:00 A.M. to 10:00 P.M. <p>An acoustical analysis shall be conducted to demonstrate that City noise standards would be achieved by these measures. Additional measures shall be implemented, if needed, to meet the standards.</p>	<p>Project plans will be reviewed for compliance. The applicants shall submit site-specific acoustical analyses to the Chief Building Inspector for review.</p>	<p><i>Pre-Construction:</i> Prior to issuance of Improvement Plans and/or Building Permits</p> <p>Add as note on Improvement Plans and Building Plans</p>	<p>Engineering will review Improvement Plans for compliance with wall and noise requirements.</p> <p>Building will review Building Plans for compliance with HVAC requirements.</p>	<p>An Acoustical Study</p>	
<p>MM 4.8-1: Cease Work and Consult with Qualified Archaeologist</p> <p>Should any cultural resources, such as structural features, any amount of bone or shell, artifacts, human remains, or architectural remains be encountered during any subsurface development activities, work shall be suspended within 100 feet of the find, and the City of Roseville shall be immediately notified. At that time, the City shall coordinate any necessary investigation of the site with qualified archaeologists as needed to assess the resource and provide proper management recommendations. Possible management recommendations for important resources could include resource avoidance or data recovery excavations. The contractor shall implement any measures deemed necessary for the protection of the cultural resources. In addition, pursuant to section 5097.98 of the State Public Resources Code, and section 7050.5 of the State Health and Safety Code, in the event of the discovery of human remains, the County Coroner shall be immediately notified. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains.</p>	<p>This condition shall be reflected in all construction and building plans, and construction site workers shall be advised by the site manager of this measure.</p>	<p><i>Construction:</i> Measure applies if resources are discovered during construction.</p> <p>Add as note on Improvement Plans and Building Plans.</p>	<p>Engineering and Building</p>	<p>None</p>	
<p>MM 4.8-10: Cease Work Until Review Conducted by Qualified Paleontologist and Recommendations Implemented</p> <p>Should any evidence of paleontological resources (e.g., fossils) be encountered during grading or excavation, work shall be suspended within 100 feet of the find, and the City of Roseville shall be immediately notified. At that time, the City shall coordinate any necessary investigation of the site with a qualified paleontologist to assess the resource and provide proper management recommendations. Possible management recommendations for important resources could include resource avoidance or data recovery excavations. The contractor shall implement any measures deemed necessary by the paleontologist for the protection of the paleontological resources.</p>	<p>This condition shall be reflected in all construction and building plans, and construction site workers shall be advised by the site manager of this measure.</p>	<p><i>Construction:</i> Measure applies if resources are discovered during construction.</p> <p>Add as note on Improvement Plans and Building Plans.</p>	<p>Engineering and Building</p>	<p>None</p>	



MITIGATION VERIFICATION SUBMITTAL COVER SHEET

Project Title/Planning File #
Project Address
Property Owner
Planning Division Contact

SUMMARY OF VERIFICATION MATERIALS INCLUDED IN THIS SUBMITTAL

Table with 3 columns: Mitigation Measure, Supporting Attachments Included, Date Complete

I HAVE ATTACHED THE FOLLOWING REQUIRED ITEMS:

- Table of Applicable Mitigation Measures
Mitigation Verification Form(s)
Specific supporting documentation required by measure(s), if applicable (e.g. biologist's report)

I hereby certify under penalty of perjury under the laws of the State of California that I am the property owner or an agent of the property owner and am authorized to submit this Mitigation Verification Form. I also certify that the above-listed mitigation measures have been completed in the manner required, and that all of the information in this submittal is true and correct, to the best of my knowledge:

Signature and Date
Print Name
Contact Number

MITIGATION VERIFICATION FORM

Mitigation Measure _____

Description of Monitoring and Verification Work Performed. The following information is a required part of the description: dates, personnel names or titles, and the stage/phase of construction work. Additional notes sheets may be attached, if necessary, or the below may simply reference a separate attachment that provides the required information.

INSTRUCTIONS

COVER SHEET:

A Cover Sheet for the project/development is prepared by City staff, with the top portion filled out. Each time Mitigation Verification Forms(s) are being submitted, a Cover Sheet completed by the Developer, Contractor, or Designee is required. An example of a completed summary table is provided below. The signature on the Cover Sheet must be *original wet ink*.

EXAMPLE MITIGATION VERIFICATION SUBMITTAL COVER SHEET

Project Title/Planning File #	New Coffee Shop, PL15-0000
Project Address	10 Justashort Street
Property Owner	Jane Owner
Planning Division Contact	Joe Planner, Associate Planner, (916) 774-####

SUMMARY OF VERIFICATION MATERIALS INCLUDED IN THIS SUBMITTAL

Mitigation Measure	Supporting Attachments Included	Date Complete
MM-3	Copy of survey report signed by biologist	5/10/2016
MM-4	All information included in Mitigation Verification Form	5/12/2016
MM-5	E-mail from Air District approving Dust Control Plan	5/05/2016

MITIGATION VERIFICATION FORM:

A Mitigation Verification Form is provided by City staff, along with the Cover Sheet and Table of Applicable Mitigation Measures. A form is filled in and submitted for each mitigation measure by the Developer, Contractor, or Designee. The form needs only the mitigation number to be filled in, along with the Description of Monitoring and Verification Work Performed. Multiple forms may be submitted simultaneously, under one cover sheet. It is also permissible to submit a form for each part of a measure, on separate dates. For instance, in the example measure MM-4 in the table above, the actual mitigation requires informing construction workers *and* retaining a qualified archeologist if resources are uncovered. Thus, a developer may submit a form in May certifying that construction workers have been informed, and also submit a second copy of the form in July because resources were discovered and additional actions had to be undertaken.

Each mitigation measure specifies the type of supporting documentation required; this must be submitted in order for the City to accept the mitigation as complete. An example of a completed Mitigation Verification Form is provided below.

EXAMPLE **MITIGATION VERIFICATION FORM**

Mitigation Measure MM3

Description of Monitoring and Verification Work Performed. The following information is a required part of the description: dates, personnel names or titles, and the stage/phase of construction work. Additional notes sheets may be attached, if necessary, or the below may simply reference a separate attachment that provides the required information.

The mitigation measure text is included on the Improvement Plans General Notes page (Improvement Plan EN15-0001). On May 4, 2016, prior to any ground-disturbing activities (the pre-construction phase), a site meeting was held. At this meeting, workers on the site were informed of the potential to unearth remains, and were instructed to cease work and notify their supervisor immediately if any resources were observed.

W-20 Coffee Shack - Placer-Sacramento County, Annual

W-20 Coffee Shack
Placer-Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Fast Food Restaurant with Drive Thru	0.91	1000sqft	0.02	910.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	2			Operational Year	2022
Utility Company	Roseville Electric				
CO2 Intensity (lb/MW hr)	793.8	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Start of construction and operational year are estimated.

Land Use - Proposed use is a drive thru coffee shop.

Energy Use -

Table Name	Column Name	Default Value	New Value
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2.0 Emissions Summary

W-20 Coffee Shack - Placer-Sacramento County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2021	8-31-2021	0.2840	0.2840
2	9-1-2021	9-30-2021	0.0939	0.0939
		Highest	0.2840	0.2840

2.2 Overall Operational
Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.9800e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	5.4000e-004	4.8800e-003	4.1000e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	15.5851	15.5851	4.8000e-004	1.8000e-004	15.6492
Mobile	0.1067	0.7111	0.8355	2.7100e-003	0.1691	2.3700e-003	0.1715	0.0455	2.2200e-003	0.0477	0.0000	250.1873	250.1873	0.0151	0.0000	250.5645
Waste						0.0000	0.0000		0.0000	0.0000	2.1274	0.0000	2.1274	0.1257	0.0000	5.2704
Water						0.0000	0.0000		0.0000	0.0000	0.0876	0.5604	0.6480	9.0200e-003	2.2000e-004	0.9381
Total	0.1112	0.7159	0.8396	2.7400e-003	0.1691	2.7400e-003	0.1719	0.0455	2.5900e-003	0.0481	2.2150	266.3328	268.5478	0.1503	4.0000e-004	272.4223

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.9800e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	5.4000e-004	4.8800e-003	4.1000e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	15.5851	15.5851	4.8000e-004	1.8000e-004	15.6492
Mobile	0.1067	0.7111	0.8355	2.7100e-003	0.1691	2.3700e-003	0.1715	0.0455	2.2200e-003	0.0477	0.0000	250.1873	250.1873	0.0151	0.0000	250.5645
Waste						0.0000	0.0000		0.0000	0.0000	2.1274	0.0000	2.1274	0.1257	0.0000	5.2704
Water						0.0000	0.0000		0.0000	0.0000	0.0876	0.5604	0.6480	9.0200e-003	2.2000e-004	0.9381
Total	0.1112	0.7159	0.8396	2.7400e-003	0.1691	2.7400e-003	0.1719	0.0455	2.5900e-003	0.0481	2.2150	266.3328	268.5478	0.1503	4.0000e-004	272.4223

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

3.0 Construction Detail

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2021	6/14/2021	5	10	
2	Site Preparation	Site Preparation	6/15/2021	6/15/2021	5	1	
3	Grading	Grading	6/16/2021	6/17/2021	5	2	
4	Building Construction	Building Construction	6/18/2021	11/4/2021	5	100	
5	Paving	Paving	11/5/2021	11/11/2021	5	5	
6	Architectural Coating	Architectural Coating	11/12/2021	11/18/2021	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,365; Non-Residential Outdoor: 455; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.9800e-003	0.0363	0.0379	6.0000e-005		2.0400e-003	2.0400e-003		1.9400e-003	1.9400e-003	0.0000	5.2047	5.2047	9.7000e-004	0.0000	5.2289
Total	3.9800e-003	0.0363	0.0379	6.0000e-005		2.0400e-003	2.0400e-003		1.9400e-003	1.9400e-003	0.0000	5.2047	5.2047	9.7000e-004	0.0000	5.2289

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3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.1000e-004	1.1900e-003	0.0000	3.9000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3270	0.3270	1.0000e-005	0.0000	0.3272
Total	1.6000e-004	1.1000e-004	1.1900e-003	0.0000	3.9000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3270	0.3270	1.0000e-005	0.0000	0.3272

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.9800e-003	0.0363	0.0379	6.0000e-005		2.0400e-003	2.0400e-003		1.9400e-003	1.9400e-003	0.0000	5.2047	5.2047	9.7000e-004	0.0000	5.2289
Total	3.9800e-003	0.0363	0.0379	6.0000e-005		2.0400e-003	2.0400e-003		1.9400e-003	1.9400e-003	0.0000	5.2047	5.2047	9.7000e-004	0.0000	5.2289

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3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.1000e-004	1.1900e-003	0.0000	3.9000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3270	0.3270	1.0000e-005	0.0000	0.3272
Total	1.6000e-004	1.1000e-004	1.1900e-003	0.0000	3.9000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3270	0.3270	1.0000e-005	0.0000	0.3272

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2000e-004	3.9100e-003	2.0100e-003	0.0000		1.5000e-004	1.5000e-004		1.4000e-004	1.4000e-004	0.0000	0.4276	0.4276	1.4000e-004	0.0000	0.4310
Total	3.2000e-004	3.9100e-003	2.0100e-003	0.0000	2.7000e-004	1.5000e-004	4.2000e-004	3.0000e-005	1.4000e-004	1.7000e-004	0.0000	0.4276	0.4276	1.4000e-004	0.0000	0.4310

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3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0164	0.0164	0.0000	0.0000	0.0164
Total	1.0000e-005	1.0000e-005	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0164	0.0164	0.0000	0.0000	0.0164

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2000e-004	3.9100e-003	2.0100e-003	0.0000		1.5000e-004	1.5000e-004		1.4000e-004	1.4000e-004	0.0000	0.4276	0.4276	1.4000e-004	0.0000	0.4310
Total	3.2000e-004	3.9100e-003	2.0100e-003	0.0000	2.7000e-004	1.5000e-004	4.2000e-004	3.0000e-005	1.4000e-004	1.7000e-004	0.0000	0.4276	0.4276	1.4000e-004	0.0000	0.4310

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3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0164	0.0164	0.0000	0.0000	0.0164
Total	1.0000e-005	1.0000e-005	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0164	0.0164	0.0000	0.0000	0.0164

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.0000e-004	7.2500e-003	7.5700e-003	1.0000e-005		4.1000e-004	4.1000e-004		3.9000e-004	3.9000e-004	0.0000	1.0409	1.0409	1.9000e-004	0.0000	1.0458
Total	8.0000e-004	7.2500e-003	7.5700e-003	1.0000e-005	7.5000e-004	4.1000e-004	1.1600e-003	4.1000e-004	3.9000e-004	8.0000e-004	0.0000	1.0409	1.0409	1.9000e-004	0.0000	1.0458

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3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.4000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0654	0.0654	0.0000	0.0000	0.0654
Total	3.0000e-005	2.0000e-005	2.4000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0654	0.0654	0.0000	0.0000	0.0654

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.0000e-004	7.2500e-003	7.5700e-003	1.0000e-005		4.1000e-004	4.1000e-004		3.9000e-004	3.9000e-004	0.0000	1.0409	1.0409	1.9000e-004	0.0000	1.0458
Total	8.0000e-004	7.2500e-003	7.5700e-003	1.0000e-005	7.5000e-004	4.1000e-004	1.1600e-003	4.1000e-004	3.9000e-004	8.0000e-004	0.0000	1.0409	1.0409	1.9000e-004	0.0000	1.0458

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3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.4000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0654	0.0654	0.0000	0.0000	0.0654
Total	3.0000e-005	2.0000e-005	2.4000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0654	0.0654	0.0000	0.0000	0.0654

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0388	0.3993	0.3632	5.7000e-004		0.0224	0.0224		0.0206	0.0206	0.0000	50.0410	50.0410	0.0162	0.0000	50.4456
Total	0.0388	0.3993	0.3632	5.7000e-004		0.0224	0.0224		0.0206	0.0206	0.0000	50.0410	50.0410	0.0162	0.0000	50.4456

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3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0388	0.3993	0.3632	5.7000e-004		0.0224	0.0224		0.0206	0.0206	0.0000	50.0410	50.0410	0.0162	0.0000	50.4456
Total	0.0388	0.3993	0.3632	5.7000e-004		0.0224	0.0224		0.0206	0.0206	0.0000	50.0410	50.0410	0.0162	0.0000	50.4456

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3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.8000e-003	0.0168	0.0177	3.0000e-005		8.8000e-004	8.8000e-004		8.2000e-004	8.2000e-004	0.0000	2.3481	2.3481	6.8000e-004	0.0000	2.3652
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.8000e-003	0.0168	0.0177	3.0000e-005		8.8000e-004	8.8000e-004		8.2000e-004	8.2000e-004	0.0000	2.3481	2.3481	6.8000e-004	0.0000	2.3652

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3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.0000e-004	1.0700e-003	0.0000	3.5000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.2943	0.2943	1.0000e-005	0.0000	0.2944
Total	1.5000e-004	1.0000e-004	1.0700e-003	0.0000	3.5000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.2943	0.2943	1.0000e-005	0.0000	0.2944

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.8000e-003	0.0168	0.0177	3.0000e-005		8.8000e-004	8.8000e-004		8.2000e-004	8.2000e-004	0.0000	2.3481	2.3481	6.8000e-004	0.0000	2.3652
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.8000e-003	0.0168	0.0177	3.0000e-005		8.8000e-004	8.8000e-004		8.2000e-004	8.2000e-004	0.0000	2.3481	2.3481	6.8000e-004	0.0000	2.3652

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3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.0000e-004	1.0700e-003	0.0000	3.5000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.2943	0.2943	1.0000e-005	0.0000	0.2944
Total	1.5000e-004	1.0000e-004	1.0700e-003	0.0000	3.5000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.2943	0.2943	1.0000e-005	0.0000	0.2944

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.2200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.5000e-004	3.8200e-003	4.5400e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394
Total	4.7700e-003	3.8200e-003	4.5400e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394

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3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.2200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.5000e-004	3.8200e-003	4.5400e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394
Total	4.7700e-003	3.8200e-003	4.5400e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394

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3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1067	0.7111	0.8355	2.7100e-003	0.1691	2.3700e-003	0.1715	0.0455	2.2200e-003	0.0477	0.0000	250.1873	250.1873	0.0151	0.0000	250.5645
Unmitigated	0.1067	0.7111	0.8355	2.7100e-003	0.1691	2.3700e-003	0.1715	0.0455	2.2200e-003	0.0477	0.0000	250.1873	250.1873	0.0151	0.0000	250.5645

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant with Drive Thru	451.47	657.05	493.88	454,919	454,919
Total	451.47	657.05	493.88	454,919	454,919

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Fast Food Restaurant with Drive	9.50	7.30	7.30	2.20	78.80	19.00	29	21	50

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant with Drive Thru	0.499712	0.039404	0.220288	0.124864	0.021993	0.006021	0.030614	0.046741	0.001428	0.001188	0.005840	0.000765	0.001142

5.0 Energy Detail

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Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	10.2720	10.2720	3.8000e-004	8.0000e-005	10.3045
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	10.2720	10.2720	3.8000e-004	8.0000e-005	10.3045
NaturalGas Mitigated	5.4000e-004	4.8800e-003	4.1000e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	5.3131	5.3131	1.0000e-004	1.0000e-004	5.3446
NaturalGas Unmitigated	5.4000e-004	4.8800e-003	4.1000e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	5.3131	5.3131	1.0000e-004	1.0000e-004	5.3446

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant with Drive Thru	99563.1	5.4000e-004	4.8800e-003	4.1000e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	5.3131	5.3131	1.0000e-004	1.0000e-004	5.3446
Total		5.4000e-004	4.8800e-003	4.1000e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	5.3131	5.3131	1.0000e-004	1.0000e-004	5.3446

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant with Drive Thru	99563.1	5.4000e-004	4.8800e-003	4.1000e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	5.3131	5.3131	1.0000e-004	1.0000e-004	5.3446
Total		5.4000e-004	4.8800e-003	4.1000e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	5.3131	5.3131	1.0000e-004	1.0000e-004	5.3446

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant with Drive Thru	28528.5	10.2720	3.8000e-004	8.0000e-005	10.3045
Total		10.2720	3.8000e-004	8.0000e-005	10.3045

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant with Drive Thru	28528.5	10.2720	3.8000e-004	8.0000e-005	10.3045
Total		10.2720	3.8000e-004	8.0000e-005	10.3045

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.9800e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	3.9800e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.2000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.5500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	3.9700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

W-20 Coffee Shack - Placer-Sacramento County, Annual

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.2000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.5500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	3.9700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

W-20 Coffee Shack - Placer-Sacramento County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.6480	9.0200e-003	2.2000e-004	0.9381
Unmitigated	0.6480	9.0200e-003	2.2000e-004	0.9381

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant with Drive Thru	0.276216 / 0.0176308	0.6480	9.0200e-003	2.2000e-004	0.9381
Total		0.6480	9.0200e-003	2.2000e-004	0.9381

W-20 Coffee Shack - Placer-Sacramento County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant with Drive Thru	0.276216 / 0.0176308	0.6480	9.0200e-003	2.2000e-004	0.9381
Total		0.6480	9.0200e-003	2.2000e-004	0.9381

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.1274	0.1257	0.0000	5.2704
Unmitigated	2.1274	0.1257	0.0000	5.2704

W-20 Coffee Shack - Placer-Sacramento County, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant with Drive Thru	10.48	2.1274	0.1257	0.0000	5.2704
Total		2.1274	0.1257	0.0000	5.2704

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant with Drive Thru	10.48	2.1274	0.1257	0.0000	5.2704
Total		2.1274	0.1257	0.0000	5.2704

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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W-20 Coffee Shack - Placer-Sacramento County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

W-20 Coffee Shack - Placer-Sacramento County, Summer

W-20 Coffee Shack
Placer-Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Fast Food Restaurant with Drive Thru	0.91	1000sqft	0.02	910.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	2			Operational Year	2022
Utility Company	Roseville Electric				
CO2 Intensity (lb/MWhr)	793.8	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Start of construction and operational year are estimated.

Land Use - Proposed use is a drive thru coffee shop.

Energy Use -

Table Name	Column Name	Default Value	New Value
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2.0 Emissions Summary

W-20 Coffee Shack - Placer-Sacramento County, Summer

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0218	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-004	2.0000e-004	0.0000		2.1000e-004
Energy	2.9400e-003	0.0267	0.0225	1.6000e-004		2.0300e-003	2.0300e-003		2.0300e-003	2.0300e-003		32.0913	32.0913	6.2000e-004	5.9000e-004	32.2820
Mobile	1.0014	5.2262	6.0915	0.0213	1.3106	0.0173	1.3279	0.3512	0.0162	0.3675		2,170.8611	2,170.8611	0.1183		2,173.8190
Total	1.0262	5.2530	6.1141	0.0215	1.3106	0.0193	1.3299	0.3512	0.0182	0.3695		2,202.9525	2,202.9525	0.1189	5.9000e-004	2,206.1012

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0218	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-004	2.0000e-004	0.0000		2.1000e-004
Energy	2.9400e-003	0.0267	0.0225	1.6000e-004		2.0300e-003	2.0300e-003		2.0300e-003	2.0300e-003		32.0913	32.0913	6.2000e-004	5.9000e-004	32.2820
Mobile	1.0014	5.2262	6.0915	0.0213	1.3106	0.0173	1.3279	0.3512	0.0162	0.3675		2,170.8611	2,170.8611	0.1183		2,173.8190
Total	1.0262	5.2530	6.1141	0.0215	1.3106	0.0193	1.3299	0.3512	0.0182	0.3695		2,202.9525	2,202.9525	0.1189	5.9000e-004	2,206.1012

W-20 Coffee Shack - Placer-Sacramento County, Summer

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2021	6/14/2021	5	10	
2	Site Preparation	Site Preparation	6/15/2021	6/15/2021	5	1	
3	Grading	Grading	6/16/2021	6/17/2021	5	2	
4	Building Construction	Building Construction	6/18/2021	11/4/2021	5	100	
5	Paving	Paving	11/5/2021	11/11/2021	5	5	
6	Architectural Coating	Architectural Coating	11/12/2021	11/18/2021	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,365; Non-Residential Outdoor: 455; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

W-20 Coffee Shack - Placer-Sacramento County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

W-20 Coffee Shack - Placer-Sacramento County, Summer

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886		1,147.4338	1,147.4338	0.2138		1,152.7797
Total	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886		1,147.4338	1,147.4338	0.2138		1,152.7797

W-20 Coffee Shack - Placer-Sacramento County, Summer

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0361	0.0191	0.2694	7.9000e-004	0.0822	5.1000e-004	0.0827	0.0218	4.7000e-004	0.0223		78.9836	78.9836	1.8000e-003		79.0287
Total	0.0361	0.0191	0.2694	7.9000e-004	0.0822	5.1000e-004	0.0827	0.0218	4.7000e-004	0.0223		78.9836	78.9836	1.8000e-003		79.0287

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886	0.0000	1,147.4338	1,147.4338	0.2138		1,152.7797
Total	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886	0.0000	1,147.4338	1,147.4338	0.2138		1,152.7797

W-20 Coffee Shack - Placer-Sacramento County, Summer

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0361	0.0191	0.2694	7.9000e-004	0.0822	5.1000e-004	0.0827	0.0218	4.7000e-004	0.0223		78.9836	78.9836	1.8000e-003		79.0287
Total	0.0361	0.0191	0.2694	7.9000e-004	0.0822	5.1000e-004	0.0827	0.0218	4.7000e-004	0.0223		78.9836	78.9836	1.8000e-003		79.0287

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.6403	7.8204	4.0274	9.7300e-003		0.2995	0.2995		0.2755	0.2755		942.5842	942.5842	0.3049		950.2055
Total	0.6403	7.8204	4.0274	9.7300e-003	0.5303	0.2995	0.8297	0.0573	0.2755	0.3328		942.5842	942.5842	0.3049		950.2055

W-20 Coffee Shack - Placer-Sacramento County, Summer

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0181	9.5700e-003	0.1347	4.0000e-004	0.0411	2.5000e-004	0.0413	0.0109	2.3000e-004	0.0111		39.4918	39.4918	9.0000e-004		39.5143
Total	0.0181	9.5700e-003	0.1347	4.0000e-004	0.0411	2.5000e-004	0.0413	0.0109	2.3000e-004	0.0111		39.4918	39.4918	9.0000e-004		39.5143

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.6403	7.8204	4.0274	9.7300e-003		0.2995	0.2995		0.2755	0.2755	0.0000	942.5842	942.5842	0.3049		950.2055
Total	0.6403	7.8204	4.0274	9.7300e-003	0.5303	0.2995	0.8297	0.0573	0.2755	0.3328	0.0000	942.5842	942.5842	0.3049		950.2055

W-20 Coffee Shack - Placer-Sacramento County, Summer

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0181	9.5700e-003	0.1347	4.0000e-004	0.0411	2.5000e-004	0.0413	0.0109	2.3000e-004	0.0111		39.4918	39.4918	9.0000e-004		39.5143
Total	0.0181	9.5700e-003	0.1347	4.0000e-004	0.0411	2.5000e-004	0.0413	0.0109	2.3000e-004	0.0111		39.4918	39.4918	9.0000e-004		39.5143

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886		1,147.4338	1,147.4338	0.2138		1,152.7797
Total	0.7965	7.2530	7.5691	0.0120	0.7528	0.4073	1.1601	0.4138	0.3886	0.8024		1,147.4338	1,147.4338	0.2138		1,152.7797

W-20 Coffee Shack - Placer-Sacramento County, Summer

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0361	0.0191	0.2694	7.9000e-004	0.0822	5.1000e-004	0.0827	0.0218	4.7000e-004	0.0223		78.9836	78.9836	1.8000e-003		79.0287
Total	0.0361	0.0191	0.2694	7.9000e-004	0.0822	5.1000e-004	0.0827	0.0218	4.7000e-004	0.0223		78.9836	78.9836	1.8000e-003		79.0287

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886	0.0000	1,147.4338	1,147.4338	0.2138		1,152.7797
Total	0.7965	7.2530	7.5691	0.0120	0.7528	0.4073	1.1601	0.4138	0.3886	0.8024	0.0000	1,147.4338	1,147.4338	0.2138		1,152.7797

W-20 Coffee Shack - Placer-Sacramento County, Summer

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0361	0.0191	0.2694	7.9000e-004	0.0822	5.1000e-004	0.0827	0.0218	4.7000e-004	0.0223		78.9836	78.9836	1.8000e-003		79.0287
Total	0.0361	0.0191	0.2694	7.9000e-004	0.0822	5.1000e-004	0.0827	0.0218	4.7000e-004	0.0223		78.9836	78.9836	1.8000e-003		79.0287

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7750	7.9850	7.2637	0.0114		0.4475	0.4475		0.4117	0.4117		1,103.2158	1,103.2158	0.3568		1,112.1358
Total	0.7750	7.9850	7.2637	0.0114		0.4475	0.4475		0.4117	0.4117		1,103.2158	1,103.2158	0.3568		1,112.1358

W-20 Coffee Shack - Placer-Sacramento County, Summer

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	0.7750	7.9850	7.2637	0.0114		0.4475	0.4475		0.4117	0.4117	0.0000	1,103.2158	1,103.2158	0.3568			1,112.1358
Total	0.7750	7.9850	7.2637	0.0114		0.4475	0.4475		0.4117	0.4117	0.0000	1,103.2158	1,103.2158	0.3568			1,112.1358

W-20 Coffee Shack - Placer-Sacramento County, Summer

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286		1,035.3425	1,035.3425	0.3016		1,042.8818
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286		1,035.3425	1,035.3425	0.3016		1,042.8818

W-20 Coffee Shack - Placer-Sacramento County, Summer

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0650	0.0344	0.4849	1.4300e-003	0.1479	9.1000e-004	0.1488	0.0392	8.4000e-004	0.0401		142.1705	142.1705	3.2400e-003		142.2516
Total	0.0650	0.0344	0.4849	1.4300e-003	0.1479	9.1000e-004	0.1488	0.0392	8.4000e-004	0.0401		142.1705	142.1705	3.2400e-003		142.2516

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286	0.0000	1,035.3425	1,035.3425	0.3016		1,042.8818
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286	0.0000	1,035.3425	1,035.3425	0.3016		1,042.8818

W-20 Coffee Shack - Placer-Sacramento County, Summer

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0650	0.0344	0.4849	1.4300e-003	0.1479	9.1000e-004	0.1488	0.0392	8.4000e-004	0.0401		142.1705	142.1705	3.2400e-003		142.2516
Total	0.0650	0.0344	0.4849	1.4300e-003	0.1479	9.1000e-004	0.1488	0.0392	8.4000e-004	0.0401		142.1705	142.1705	3.2400e-003		142.2516

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.6871					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	1.9060	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309

W-20 Coffee Shack - Placer-Sacramento County, Summer

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.6871					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	1.9060	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309

W-20 Coffee Shack - Placer-Sacramento County, Summer

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

W-20 Coffee Shack - Placer-Sacramento County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0014	5.2262	6.0915	0.0213	1.3106	0.0173	1.3279	0.3512	0.0162	0.3675		2,170.861 1	2,170.861 1	0.1183		2,173.819 0
Unmitigated	1.0014	5.2262	6.0915	0.0213	1.3106	0.0173	1.3279	0.3512	0.0162	0.3675		2,170.861 1	2,170.861 1	0.1183		2,173.819 0

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant with Drive Thru	451.47	657.05	493.88	454,919	454,919
Total	451.47	657.05	493.88	454,919	454,919

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Fast Food Restaurant with Drive	9.50	7.30	7.30	2.20	78.80	19.00	29	21	50

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant with Drive Thru	0.499712	0.039404	0.220288	0.124864	0.021993	0.006021	0.030614	0.046741	0.001428	0.001188	0.005840	0.000765	0.001142

5.0 Energy Detail

W-20 Coffee Shack - Placer-Sacramento County, Summer

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.9400e-003	0.0267	0.0225	1.6000e-004		2.0300e-003	2.0300e-003		2.0300e-003	2.0300e-003		32.0913	32.0913	6.2000e-004	5.9000e-004	32.2820
NaturalGas Unmitigated	2.9400e-003	0.0267	0.0225	1.6000e-004		2.0300e-003	2.0300e-003		2.0300e-003	2.0300e-003		32.0913	32.0913	6.2000e-004	5.9000e-004	32.2820

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Fast Food Restaurant with Drive Thru	272.776	2.9400e-003	0.0267	0.0225	1.6000e-004		2.0300e-003	2.0300e-003		2.0300e-003	2.0300e-003		32.0913	32.0913	6.2000e-004	5.9000e-004	32.2820
Total		2.9400e-003	0.0267	0.0225	1.6000e-004		2.0300e-003	2.0300e-003		2.0300e-003	2.0300e-003		32.0913	32.0913	6.2000e-004	5.9000e-004	32.2820

W-20 Coffee Shack - Placer-Sacramento County, Summer

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Fast Food Restaurant with Drive Thru	0.272776	2.9400e-003	0.0267	0.0225	1.6000e-004		2.0300e-003	2.0300e-003		2.0300e-003	2.0300e-003		32.0913	32.0913	6.2000e-004	5.9000e-004	32.2820
Total		2.9400e-003	0.0267	0.0225	1.6000e-004		2.0300e-003	2.0300e-003		2.0300e-003	2.0300e-003		32.0913	32.0913	6.2000e-004	5.9000e-004	32.2820

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0218	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-004	2.0000e-004	0.0000		2.1000e-004
Unmitigated	0.0218	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-004	2.0000e-004	0.0000		2.1000e-004

W-20 Coffee Shack - Placer-Sacramento County, Summer

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.3100e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0195					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-004	2.0000e-004	0.0000		2.1000e-004
Total	0.0218	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-004	2.0000e-004	0.0000		2.1000e-004

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.3100e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0195					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-004	2.0000e-004	0.0000		2.1000e-004
Total	0.0218	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-004	2.0000e-004	0.0000		2.1000e-004

7.0 Water Detail

W-20 Coffee Shack - Placer-Sacramento County, Summer

7.1 Mitigation Measures Water**8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

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

Boilers

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

Equipment Type	Number
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11.0 Vegetation

W-20 Coffee Shack - Placer-Sacramento County, Winter

W-20 Coffee Shack
Placer-Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Fast Food Restaurant with Drive Thru	0.91	1000sqft	0.02	910.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	2			Operational Year	2022
Utility Company	Roseville Electric				
CO2 Intensity (lb/MW hr)	793.8	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Start of construction and operational year are estimated.

Land Use - Proposed use is a drive thru coffee shop.

Energy Use -

Table Name	Column Name	Default Value	New Value
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2.0 Emissions Summary

W-20 Coffee Shack - Placer-Sacramento County, Winter

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0218	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-004	2.0000e-004	0.0000		2.1000e-004
Energy	2.9400e-003	0.0267	0.0225	1.6000e-004		2.0300e-003	2.0300e-003		2.0300e-003	2.0300e-003		32.0913	32.0913	6.2000e-004	5.9000e-004	32.2820
Mobile	0.7560	5.2655	6.7742	0.0195	1.3106	0.0180	1.3286	0.3512	0.0169	0.3681		1,985.7423	1,985.7423	0.1311		1,989.0197
Total	0.7808	5.2922	6.7967	0.0197	1.3106	0.0200	1.3306	0.3512	0.0189	0.3701		2,017.8338	2,017.8338	0.1317	5.9000e-004	2,021.3019

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0218	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-004	2.0000e-004	0.0000		2.1000e-004
Energy	2.9400e-003	0.0267	0.0225	1.6000e-004		2.0300e-003	2.0300e-003		2.0300e-003	2.0300e-003		32.0913	32.0913	6.2000e-004	5.9000e-004	32.2820
Mobile	0.7560	5.2655	6.7742	0.0195	1.3106	0.0180	1.3286	0.3512	0.0169	0.3681		1,985.7423	1,985.7423	0.1311		1,989.0197
Total	0.7808	5.2922	6.7967	0.0197	1.3106	0.0200	1.3306	0.3512	0.0189	0.3701		2,017.8338	2,017.8338	0.1317	5.9000e-004	2,021.3019

W-20 Coffee Shack - Placer-Sacramento County, Winter

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2021	6/14/2021	5	10	
2	Site Preparation	Site Preparation	6/15/2021	6/15/2021	5	1	
3	Grading	Grading	6/16/2021	6/17/2021	5	2	
4	Building Construction	Building Construction	6/18/2021	11/4/2021	5	100	
5	Paving	Paving	11/5/2021	11/11/2021	5	5	
6	Architectural Coating	Architectural Coating	11/12/2021	11/18/2021	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,365; Non-Residential Outdoor: 455; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

W-20 Coffee Shack - Placer-Sacramento County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

W-20 Coffee Shack - Placer-Sacramento County, Winter

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886		1,147.4338	1,147.4338	0.2138		1,152.7797
Total	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886		1,147.4338	1,147.4338	0.2138		1,152.7797

W-20 Coffee Shack - Placer-Sacramento County, Winter

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0350	0.0240	0.2399	7.1000e-004	0.0822	5.1000e-004	0.0827	0.0218	4.7000e-004	0.0223		70.3189	70.3189	1.6300e-003		70.3597
Total	0.0350	0.0240	0.2399	7.1000e-004	0.0822	5.1000e-004	0.0827	0.0218	4.7000e-004	0.0223		70.3189	70.3189	1.6300e-003		70.3597

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886	0.0000	1,147.4338	1,147.4338	0.2138		1,152.7797
Total	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886	0.0000	1,147.4338	1,147.4338	0.2138		1,152.7797

W-20 Coffee Shack - Placer-Sacramento County, Winter

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0350	0.0240	0.2399	7.1000e-004	0.0822	5.1000e-004	0.0827	0.0218	4.7000e-004	0.0223		70.3189	70.3189	1.6300e-003		70.3597
Total	0.0350	0.0240	0.2399	7.1000e-004	0.0822	5.1000e-004	0.0827	0.0218	4.7000e-004	0.0223		70.3189	70.3189	1.6300e-003		70.3597

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.6403	7.8204	4.0274	9.7300e-003		0.2995	0.2995		0.2755	0.2755		942.5842	942.5842	0.3049		950.2055
Total	0.6403	7.8204	4.0274	9.7300e-003	0.5303	0.2995	0.8297	0.0573	0.2755	0.3328		942.5842	942.5842	0.3049		950.2055

W-20 Coffee Shack - Placer-Sacramento County, Winter

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0175	0.0120	0.1200	3.5000e-004	0.0411	2.5000e-004	0.0413	0.0109	2.3000e-004	0.0111		35.1595	35.1595	8.2000e-004		35.1798
Total	0.0175	0.0120	0.1200	3.5000e-004	0.0411	2.5000e-004	0.0413	0.0109	2.3000e-004	0.0111		35.1595	35.1595	8.2000e-004		35.1798

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.6403	7.8204	4.0274	9.7300e-003		0.2995	0.2995		0.2755	0.2755	0.0000	942.5842	942.5842	0.3049		950.2055
Total	0.6403	7.8204	4.0274	9.7300e-003	0.5303	0.2995	0.8297	0.0573	0.2755	0.3328	0.0000	942.5842	942.5842	0.3049		950.2055

W-20 Coffee Shack - Placer-Sacramento County, Winter

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0175	0.0120	0.1200	3.5000e-004	0.0411	2.5000e-004	0.0413	0.0109	2.3000e-004	0.0111		35.1595	35.1595	8.2000e-004		35.1798
Total	0.0175	0.0120	0.1200	3.5000e-004	0.0411	2.5000e-004	0.0413	0.0109	2.3000e-004	0.0111		35.1595	35.1595	8.2000e-004		35.1798

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886		1,147.4338	1,147.4338	0.2138		1,152.7797
Total	0.7965	7.2530	7.5691	0.0120	0.7528	0.4073	1.1601	0.4138	0.3886	0.8024		1,147.4338	1,147.4338	0.2138		1,152.7797

W-20 Coffee Shack - Placer-Sacramento County, Winter

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0350	0.0240	0.2399	7.1000e-004	0.0822	5.1000e-004	0.0827	0.0218	4.7000e-004	0.0223		70.3189	70.3189	1.6300e-003		70.3597
Total	0.0350	0.0240	0.2399	7.1000e-004	0.0822	5.1000e-004	0.0827	0.0218	4.7000e-004	0.0223		70.3189	70.3189	1.6300e-003		70.3597

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886	0.0000	1,147.4338	1,147.4338	0.2138		1,152.7797
Total	0.7965	7.2530	7.5691	0.0120	0.7528	0.4073	1.1601	0.4138	0.3886	0.8024	0.0000	1,147.4338	1,147.4338	0.2138		1,152.7797

W-20 Coffee Shack - Placer-Sacramento County, Winter

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0350	0.0240	0.2399	7.1000e-004	0.0822	5.1000e-004	0.0827	0.0218	4.7000e-004	0.0223		70.3189	70.3189	1.6300e-003		70.3597
Total	0.0350	0.0240	0.2399	7.1000e-004	0.0822	5.1000e-004	0.0827	0.0218	4.7000e-004	0.0223		70.3189	70.3189	1.6300e-003		70.3597

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7750	7.9850	7.2637	0.0114		0.4475	0.4475		0.4117	0.4117		1,103.2158	1,103.2158	0.3568		1,112.1358
Total	0.7750	7.9850	7.2637	0.0114		0.4475	0.4475		0.4117	0.4117		1,103.2158	1,103.2158	0.3568		1,112.1358

W-20 Coffee Shack - Placer-Sacramento County, Winter

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7750	7.9850	7.2637	0.0114		0.4475	0.4475		0.4117	0.4117	0.0000	1,103.2158	1,103.2158	0.3568		1,112.1358
Total	0.7750	7.9850	7.2637	0.0114		0.4475	0.4475		0.4117	0.4117	0.0000	1,103.2158	1,103.2158	0.3568		1,112.1358

W-20 Coffee Shack - Placer-Sacramento County, Winter

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286		1,035.3425	1,035.3425	0.3016		1,042.8818
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286		1,035.3425	1,035.3425	0.3016		1,042.8818

W-20 Coffee Shack - Placer-Sacramento County, Winter

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0629	0.0431	0.4319	1.2700e-003	0.1479	9.1000e-004	0.1488	0.0392	8.4000e-004	0.0401		126.5740	126.5740	2.9400e-003		126.6474
Total	0.0629	0.0431	0.4319	1.2700e-003	0.1479	9.1000e-004	0.1488	0.0392	8.4000e-004	0.0401		126.5740	126.5740	2.9400e-003		126.6474

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286	0.0000	1,035.3425	1,035.3425	0.3016		1,042.8818
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286	0.0000	1,035.3425	1,035.3425	0.3016		1,042.8818

W-20 Coffee Shack - Placer-Sacramento County, Winter

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0629	0.0431	0.4319	1.2700e-003	0.1479	9.1000e-004	0.1488	0.0392	8.4000e-004	0.0401		126.5740	126.5740	2.9400e-003		126.6474
Total	0.0629	0.0431	0.4319	1.2700e-003	0.1479	9.1000e-004	0.1488	0.0392	8.4000e-004	0.0401		126.5740	126.5740	2.9400e-003		126.6474

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.6871					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	1.9060	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309

W-20 Coffee Shack - Placer-Sacramento County, Winter

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.6871					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	1.9060	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309

W-20 Coffee Shack - Placer-Sacramento County, Winter

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

W-20 Coffee Shack - Placer-Sacramento County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.7560	5.2655	6.7742	0.0195	1.3106	0.0180	1.3286	0.3512	0.0169	0.3681		1,985.7423	1,985.7423	0.1311		1,989.0197
Unmitigated	0.7560	5.2655	6.7742	0.0195	1.3106	0.0180	1.3286	0.3512	0.0169	0.3681		1,985.7423	1,985.7423	0.1311		1,989.0197

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant with Drive Thru	451.47	657.05	493.88	454,919	454,919
Total	451.47	657.05	493.88	454,919	454,919

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Fast Food Restaurant with Drive	9.50	7.30	7.30	2.20	78.80	19.00	29	21	50

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant with Drive Thru	0.499712	0.039404	0.220288	0.124864	0.021993	0.006021	0.030614	0.046741	0.001428	0.001188	0.005840	0.000765	0.001142

5.0 Energy Detail

W-20 Coffee Shack - Placer-Sacramento County, Winter

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.9400e-003	0.0267	0.0225	1.6000e-004		2.0300e-003	2.0300e-003		2.0300e-003	2.0300e-003		32.0913	32.0913	6.2000e-004	5.9000e-004	32.2820
NaturalGas Unmitigated	2.9400e-003	0.0267	0.0225	1.6000e-004		2.0300e-003	2.0300e-003		2.0300e-003	2.0300e-003		32.0913	32.0913	6.2000e-004	5.9000e-004	32.2820

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Fast Food Restaurant with Drive Thru	272.776	2.9400e-003	0.0267	0.0225	1.6000e-004		2.0300e-003	2.0300e-003		2.0300e-003	2.0300e-003		32.0913	32.0913	6.2000e-004	5.9000e-004	32.2820
Total		2.9400e-003	0.0267	0.0225	1.6000e-004		2.0300e-003	2.0300e-003		2.0300e-003	2.0300e-003		32.0913	32.0913	6.2000e-004	5.9000e-004	32.2820

W-20 Coffee Shack - Placer-Sacramento County, Winter

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Fast Food Restaurant with Drive Thru	0.272776	2.9400e-003	0.0267	0.0225	1.6000e-004		2.0300e-003	2.0300e-003		2.0300e-003	2.0300e-003		32.0913	32.0913	6.2000e-004	5.9000e-004	32.2820
Total		2.9400e-003	0.0267	0.0225	1.6000e-004		2.0300e-003	2.0300e-003		2.0300e-003	2.0300e-003		32.0913	32.0913	6.2000e-004	5.9000e-004	32.2820

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0218	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-004	2.0000e-004	0.0000		2.1000e-004
Unmitigated	0.0218	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-004	2.0000e-004	0.0000		2.1000e-004

W-20 Coffee Shack - Placer-Sacramento County, Winter

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.3100e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0195					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-004	2.0000e-004	0.0000		2.1000e-004
Total	0.0218	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-004	2.0000e-004	0.0000		2.1000e-004

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.3100e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0195					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-004	2.0000e-004	0.0000		2.1000e-004
Total	0.0218	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-004	2.0000e-004	0.0000		2.1000e-004

7.0 Water Detail

W-20 Coffee Shack - Placer-Sacramento County, Winter

7.1 Mitigation Measures Water**8.0 Waste Detail**

8.1 Mitigation Measures Waste**9.0 Operational Offroad**

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Environmental Noise Assessment

Parcel W-20 Coffee Kiosk

Roseville, California

BAC Job # 2020-166

Prepared For:

JMC Homes

Attn: Ryan Biziewski
1430 Blue Oaks Boulevard, Suite 190
Roseville, CA 95747

Prepared By:

Bollard Acoustical Consultants, Inc.



Dario Gotchet, Senior Consultant

November 3, 2020



Introduction

The Parcel W-20 Coffee Kiosk (project) is located on the southeast corner of Pleasant Grove Boulevard and Upland Drive in Roseville, California. The project proposes the construction of a coffee kiosk that would include drive-through services. Existing land uses in the immediate project vicinity include single-family residential to the north and west, and future residential to the south and southwest. The project site is located within the West Roseville Specific Plan. The project area and site plan are shown on Figures 1 and 2, respectively.

Due to the proximity of the proposed project to existing and future residential uses, Bollard Acoustical Consultants, Inc. (BAC) was retained to prepare an assessment of potential noise impacts associated with the project. Specifically, the purposes of this assessment are to quantify noise levels associated with project operations, to assess the state of compliance of those noise levels with applicable City of Roseville and West Roseville Specific Plan Mitigation Monitoring Program noise criteria, and if necessary, to recommend measures to reduce those noise levels to acceptable limits at the nearest existing and future residential uses.

Noise Fundamentals and Terminology

Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard, and thus are called sound. Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Another useful aspect of the decibel scale is that changes in levels (dB) correspond closely to human perception of relative loudness. Appendix A contains definitions of Acoustical Terminology. Figure 3 shows common noise levels associated with various sources.

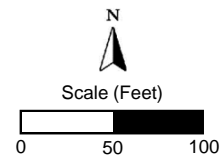
The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by weighing the frequency response of a sound level meter by means of the standardized A-weighting network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels in decibels.

Community noise is commonly described in terms of the “ambient” noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}) over a given time period (usually one hour). The L_{eq} is the foundation of the Day-Night Average Level noise descriptor, DNL or L_{dn} , and shows very good correlation with community response to noise.



Legend

- Project Parcel Boundaries (Approximate)
- Long-Term Noise Survey Locations

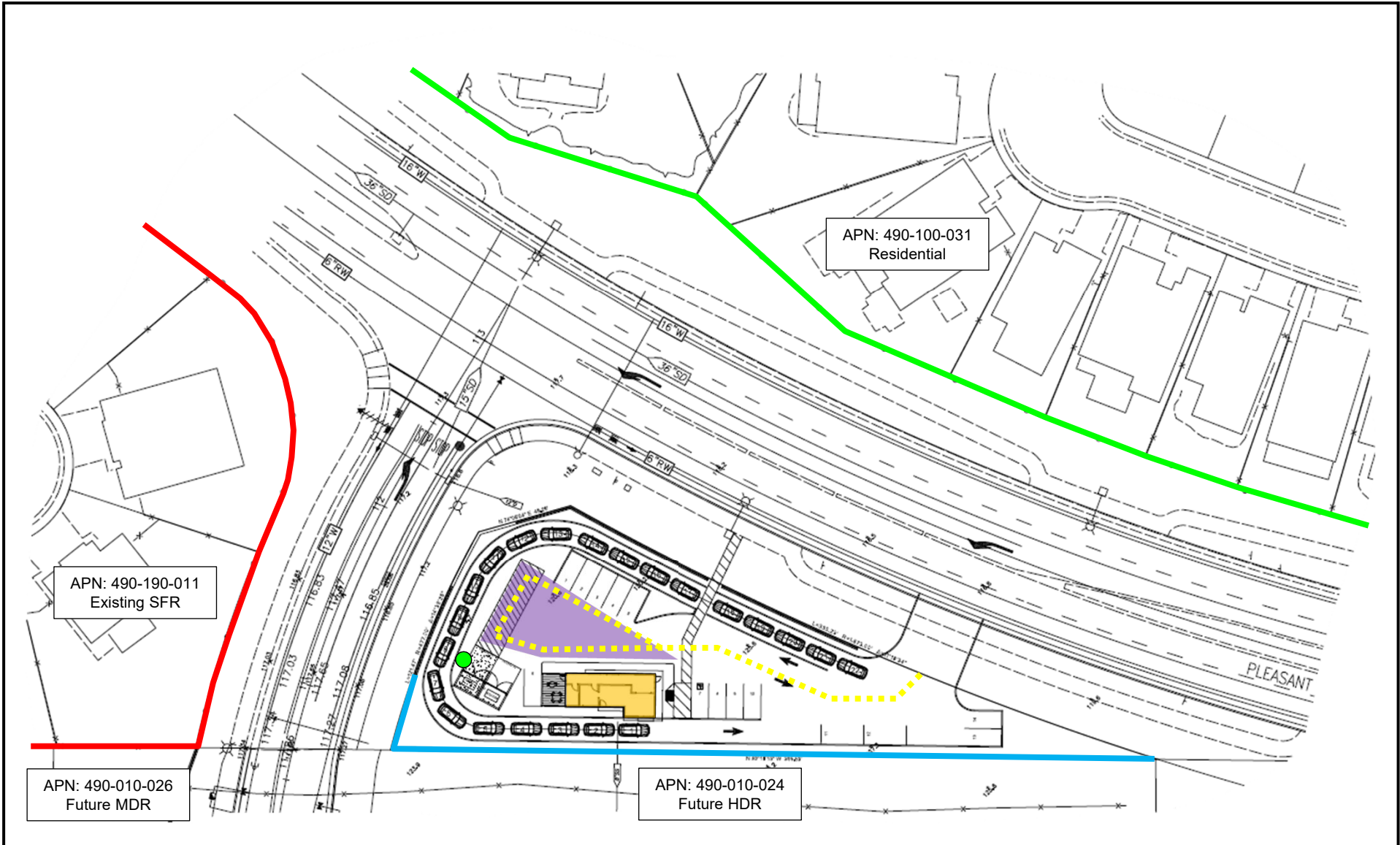


**Parcel W-20 Coffee Kiosk
Roseville, California**

Project Site Location & Adjacent Land Uses

Figure 1



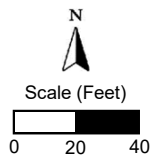


Legend

- Drive-Through Speaker
- Coffee Kiosk Building
- Delivery Area (Assumed)
- ⋯ On-Site Delivery Truck Circulation Route (Assumed)
- Existing 7' Solid Wall
- Existing 6' Solid Wall

Drive-Through Operations Noise Mitigation

- 10' Solid Noise Barrier (Nighttime Compliance Only)



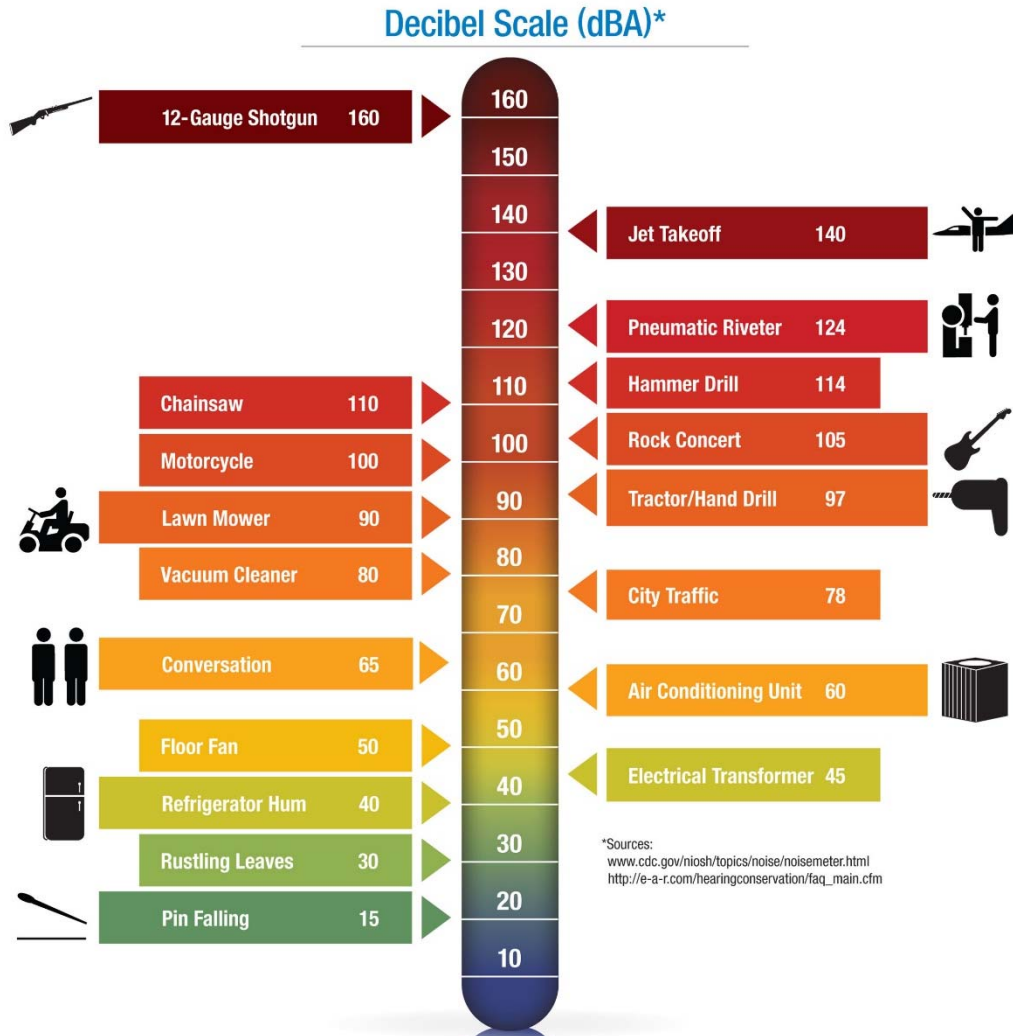
**Parcel W-20 Coffee Kiosk
Roseville, California**

Project Site Plan

Figure 2



Figure 3
Typical A-Weighted Sound Levels of Common Noise Sources



The Day-Night Average Level (DNL or L_{dn}) is based upon the average noise level over a 24-hour day, with a +10-decibel weighting applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because DNL represents a 24-hour average, it tends to disguise short-term variations in the noise environment. DNL-based noise standards are commonly used to assess noise impacts associated with traffic, railroad, and aircraft noise sources.

Existing Ambient Noise Environment within Project Vicinity

The existing ambient noise environment in the immediate project vicinity is defined primarily by traffic on Pleasant Grove Boulevard. To generally quantify the existing ambient noise level environment within the project vicinity, BAC conducted long-term (24-hour) noise level measurements at two (2) locations on October 27, 2020. The noise survey locations are shown on Figure 1, identified as sites LT-1 and LT-2. Measurement sites LT-1 and LT-2 were selected to be representative of the ambient noise level environment at the nearest existing residential uses to the west and north of the project parcel, respectively. Photographs of the noise level survey locations are provided in Appendix B.

Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meters were used for the ambient noise level survey. The meters were calibrated immediately before and after use with an LDL Model CAL200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

The results of the long-term ambient noise level survey are shown numerically and graphically in Appendices C and D (respectively) and are summarized below in Table 1.

Table 1
Summary of Long-Term Ambient Noise Measurement Results – October 27, 2020¹

Site Description ²	DNL, dB	Average Measured Hourly Noise Levels, dB			
		Daytime ³		Nighttime ⁴	
		L _{eq}	L _{max}	L _{eq}	L _{max}
LT-1: West of project site along residential boundary of APN: 490-190-011	65	61	77	57	74
LT-2: North of project site along residential boundary of APN: 490-100-031	69	67	81	61	78

¹ Detailed summaries of the noise monitoring results are provided in Appendices C and D.
² Long-term ambient noise monitoring locations are identified on Figure 1.
³ Daytime: 7:00 a.m. to 10:00 p.m.
⁴ Nighttime: 10:00 p.m. to 7:00 a.m.
Source: Bollard Acoustical Consultants, Inc. (2020)

As indicated in Table 1, average measured hourly noise levels were higher at site LT-2. This was likely due to the proximity of the site relative to Pleasant Grove Boulevard.

Criteria for Acceptable Noise Exposure

City of Roseville General Plan Noise Element 2035

The Noise Element of the City of Roseville General Plan establishes non-transportation noise exposure limits as summarized below in Table 1 (Table IX-3 of the Noise Element). These limits are applicable to non-transportation noise sources, such as those proposed by project on-site operations. The General Plan noise level criteria is presented in Table 2.

**Table 2
Performance Standards for Non-Transportation Sources
(As Measured at the Property Line of Noise-Sensitive Uses)**

Noise Level Descriptor (dBA)	Noise Level (dBA)	
	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
Hourly L_{eq}	55	45
Maximum Level L_{max}	75	65
Notes: -Each of the noise level standards specified above shall be reduced by 5 dB for pure tone noises, noise consisting primarily of speech or music, or for recurring impulsive noises. Such noises are generally considered by residents to be particularly annoying and are a primary source of noise complaints. -These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings). -No standards have been included for interior noise levels. Standard construction practices should, with exterior noise levels identified, result in acceptable interior noise levels. Source: <i>City of Roseville General Plan, Noise Element 2035, Table IX-3</i>		

West Roseville Specific Plan Mitigation Monitoring Program

The project is located on a commercially zoned parcel within the West Roseville Specific Plan (WRSP). The WRSP Mitigation Monitoring Program contains commercial noise and operations-related criteria that would be applicable to the project. That criteria is provided below.

MM 4.5-3 Commercial noise control

For all commercial uses within 150 feet of residential uses, implement the following or equally effective measures:

- a. For commercial loading docks and on-site truck circulation areas that are planned to be within 150 feet of sensitive receptors (including backyards), the following measures shall be implemented:
 - 1. Loading docks and on-site truck circulation routes shall be designed to ensure that noise levels do not exceed 50 dB L_{eq} or 70 dB L_{max} at the nearest residence. An acoustic analysis shall demonstrate that the loading area design, including any noise attenuation features (e.g., covering, sound walls, orientation) would be adequate to achieve these standards; and
 - 2. Deliveries shall generally be limited to the hours between 7:00 a.m. to 10:00 p.m.
- b. For all commercial buildings, roof-top HVAC shall be oriented away from residential areas and systems shall not produce noise levels that exceed 50 dB at a distance of 25 feet. In addition, roof-top parapets shall block line-of-sight of equipment from noise-sensitive uses.
- c. Setbacks or enhanced barriers (e.g., 8 feet tall) as needed to achieve City standards.

Noise Standards Applicable to the Project

The primary noise sources associated with the project have been identified as drive-through operations (e.g., drive-through menu speaker board / post and vehicle idling / passbys), delivery truck loading area activities, delivery truck on-site circulation, and rooftop mechanical equipment (HVAC).

Pursuant to MM 4.5-3(a)(1) of the WRSP Mitigation Monitoring Program, commercial truck deliveries shall be limited to daytime hours (7:00 a.m. to 10:00 p.m.). In addition, because the hours of operation of the project drive-through operations are not known at this time, it was conservatively assumed for the purposes of this assessment that drive-through operations could potentially occur during both daytime and nighttime hours. Finally, the footnote in Table 2 states that each of the noise level limits shall be reduced by 5 dB for noises consisting of speech or music, which would be applicable to the project drive-through menu speaker post. Based on the information above, the City of Roseville and WRSP Mitigation Monitoring Program noise level standards applied to the project are provided in Table 3.

Table 3
Noise Level Standards Applied to the Project

Noise Source	Applicable Noise Level Standard (dBA)			
	Daytime (7:00 a.m. to 10:00 p.m.)		Nighttime (10:00 p.m. to 7:00 a.m.)	
	L _{eq}	L _{max}	L _{eq}	L _{max}
Drive-Through Menu Speaker	50	70	40	60
Drive-Through Vehicle Passbys	55	75	45	65
Delivery Truck Loading Area	55	75	--	--
Delivery Truck Circulation	55 / 50 ¹	75 / 70 ¹	--	--
Rooftop HVAC Equipment	55	75	45	65

¹ Pursuant to MM 4.5-3(a) of the WRSP Mitigation Monitoring Program, commercial truck circulation shall not exceed 50 dB L_{eq} and 70 dB L_{max} at the nearest residential uses.
Source: City of Roseville General Plan Noise Element 2035 (Table IX-3), WRSP Mitigation Monitoring Program

The noise level standards shown in Table 3 were applied at the property line of the nearest existing and future residential uses to the project. Satisfaction with the General Plan and WRSP Mitigation Monitoring Program noise level standards at the nearest residential uses would ensure compliance with the noise level criteria at residential uses located farther away.

Evaluation of Project-Generated Noise Levels

As mentioned previously, the primary noise sources associated with the project have been identified as drive-through operations, delivery truck loading area activities, delivery truck on-site circulation, and rooftop mechanical equipment (HVAC). Predicted noise levels resulting from each of these sources are evaluated in the following sections.

Predicted project-generated noise level exposure at the nearest existing residential uses to the north and west of the project takes into consideration the screening that would be provided by existing solid walls along the property boundaries of those uses. The locations of the existing noise barriers are shown on Figure 2. According to BAC field observations, the existing solid noise barriers to the west and north were estimated to be approximately 7' and 6' in height, respectively. The screening provided by the existing 7' and 6' barriers are expected to provide approximately 6 dB and 5 dB of project-generated noise level reduction at the nearest existing residential uses to the west and north, respectively.

Drive-Through Operations

The project coffee kiosk proposes to include a drive-through lane at the location identified on Figure 2. At the time of writing this report, it is unknown whether the drive-through will have an amplified speaker menu board / post. For the purposes of this analysis, it was conservatively assumed that the coffee kiosk would have an amplified drive-through speaker menu post.

To quantify the noise emissions of the proposed drive-through speaker usage and vehicle passages, BAC utilized noise measurement data collected for similar drive-through operations in the greater Sacramento area. Reference drive-through noise level data is presented in Table 4. In addition, reference noise level data for a commonly used drive-through speaker, HME SPP2 speaker post, is provided as Appendix E. The manufacturer's noise data sheet shows good agreement with measurements conducted by BAC.

Table 4
Reference Drive-Through Noise Levels

Noise Source	Measured Reference Noise Levels, dBA	
	Average (L_{eq})	Maximum (L_{max})
Vehicles ¹	60 dB at 5 feet	70 dB at 5 feet
Speaker ²	63 dB at 10 feet	67 dB at 10 feet
¹ Vehicle noise level data obtained from previous drive-through noise studies. ² Speaker noise level data obtained from measurements conducted at a representative drive-through parcel located at 2845 Bell Road in Auburn, California. Source: Bollard Acoustical Consultants, Inc. (2018)		

The Table 4 data were used to predict drive-through generated noise levels at the nearest existing and future residential uses. Assuming standard spherical spreading loss (-6 dB per doubling of distance), the drive-through operations noise levels at the nearest existing and future residential uses were predicted and the results of those predictions are shown in Table 5.

Table 5
Predicted Drive-Through Operations Noise Levels at Nearest Residential Property Lines

APN ¹	Land Use	Distance (feet) ²		Predicted Noise Levels (dBA) ³			
				Vehicles		Speaker	
		Vehicles	Speaker	L _{eq}	L _{max}	L _{eq}	L _{max}
490-190-011	Existing SFR	110	120	27	36	35	39
490-100-031	Existing SFR	155	265	25	31	30	34
490-010-026	Future MDR	135	150	31	40	39	43
490-010-024	Future HDR	12	50	52	50	49	53
Applicable General Plan Daytime Noise Standards				55	75	50	70
Applicable General Plan Nighttime Noise Standards				45	65	40	60

¹ Locations of nearest residential uses are shown on Figures 1 and 2.
² Distances scaled from center of proposed drive-through lane and speaker location to residential property lines using the provided site plans. Drive-through lane and speaker location are shown on Figure 2.
³ Predicted noise levels at nearest existing residential uses include consideration of the screening provided by existing sound walls, as discussed in this report.
Source: Bollard Acoustical Consultants, Inc. (2020)

As indicated in Table 5, project drive-through operations are predicted to satisfy the applicable City of Roseville General Plan daytime hourly average (L_{eq}) and maximum (L_{max}) noise level standards at the nearest existing and future residential property lines. However, project drive-through operations noise levels are predicted to exceed the applicable General Plan nighttime hourly average noise level standards at the future high-density residential (HDR) property line to the south (APN: 490-010-024). Therefore, should drive-through hours of operation extend into nighttime hours (10:00 p.m. to 7:00 a.m.), additional consideration of mitigation measures would be warranted for this aspect of the project.

In order to satisfy the applicable General Plan nighttime hourly average noise level standards, one of the following mitigation measures would be required:

1. The construction of a 10' solid noise barrier along the southern project property boundary. Figure 2 shows the location of the noise barrier recommended for nighttime compliance. The solid barrier could consist of either masonry or precast concrete panels. The construction of a 10' solid noise barrier at the location illustrated on Figure 2 would reduce predicted drive-through operations noise levels to 43 dB L_{eq} (vehicles) and 40 dB L_{eq} (speaker) at the property line of APN: 490-010-024, which would satisfy the applicable City of Roseville General Plan nighttime hourly average noise level standards.

OR

2. Limit all drive-through operations to daytime hours only (7:00 a.m. to 10:00 p.m.).

Truck Delivery Activities

It is the experience of BAC that deliveries of product to drive-through businesses such as the one proposed by the project occur with medium-duty vendor trucks/vans. The primary noise sources associated with delivery activities are trucks stopping (air brakes), trucks backing into position (back-up alarms), and pulling away from the loading/unloading area (revving engines). Based on a review of the site plan, the project does not propose a loading dock. Due to site design constraints indicated in the site plan, it was reasonably assumed for the purposes of this analysis that deliveries would occur on the north side of the kiosk building, illustrated on Figure 2.

For a conservative assessment of daily delivery truck noise levels at this coffee kiosk business, it was assumed that 4 medium duty trucks/vans would deliver products to the store on a typical busy day. For the purposes of predicting hourly average noise levels for comparison against the City’s hourly average (L_{eq}) noise standards, it was assumed that 2 medium duty trucks could have store deliveries during the same worst-case hour.

BAC file data indicate that noise levels associated with medium-duty truck deliveries (including side-step vans) are approximately 66 dB L_{max} and 76 dB SEL at a distance of 100 feet. Based on 2 medium duty truck deliveries during any given hour and an SEL of 76 dB, the hourly average noise level computes to 43 dB L_{eq} at a reference distance of 100 feet during the worst-case hour of deliveries. Assuming standard spherical spreading loss (-6 dB per doubling of distance), on-site delivery truck activity noise exposure at the nearest existing and future residential uses was calculated and the results of those calculations are presented in Table 6.

**Table 6
Predicted Truck Delivery Activity Noise Levels at Nearest Residential Property Lines**

APN ¹	Land Use	Distance from Delivery Area (feet) ²	Predicted Noise Levels (dBA) ³	
			L_{eq}	L_{max}
490-190-011	Existing SFR	170	33	55
490-100-031	Existing SFR	200	32	55
490-010-026	Future MDR	210	37	60
490-010-024	Future HDR	60	48	70
Applicable General Plan Daytime Noise Standards			55	75
¹ Locations of nearest residential uses are shown on Figures 1 and 2. ² Distances scaled from (assumed) delivery area to residential property lines using the provided site plans. Delivery area shown on Figure 2. ³ Predicted noise levels at nearest existing residential uses include consideration of the screening provided by existing sound walls, as discussed in this report. Source: Bollard Acoustical Consultants, Inc. (2020)				

Pursuant to MM 4.5-3(a)(1) of the WRSP Mitigation Monitoring Program, commercial truck deliveries shall be limited to daytime hours (7:00 a.m. to 10:00 p.m.). As a result, project truck delivery activity noise exposure was assessed relative to the City of Roseville General Plan daytime noise level standards only.

As indicated in Table 6, project truck delivery activity noise exposure is predicted to satisfy the applicable City of Roseville General Plan daytime hourly average (L_{eq}) and maximum (L_{max}) noise level standards at the nearest existing and future residential uses. As a result, no further consideration of noise mitigation measures would be warranted for this aspect of the project.

On-Site Delivery Truck Circulation

As mentioned in the previous section, it is the experience of BAC that deliveries of product to drive-through businesses such as the one proposed by the project occur with medium-duty vendor trucks/vans. The assumed on-site delivery truck circulation route is shown on Figure 2.

On-site delivery truck passbys are expected to be relatively brief and will occur at low speeds. To predict noise levels generated by on-site delivery truck circulation, BAC utilized file data obtained from measurements conducted by BAC of medium duty truck passbys. According to BAC file data, single-event medium truck passby noise levels are approximately 66 dB L_{max} and 76 SEL at a distance of 50 feet.

For the purposes of this analysis, it was assumed that 2 medium duty trucks could have store deliveries during the same worst-case hour. Based on a conservative 2 medium truck trips per hour, and an SEL of 76 dB per passby, the combined hourly average noise level generated by project delivery truck circulation computes to 43 dB L_{eq} at a reference distance of 50 feet from the passby route during the worst-case hour of deliveries (maximum noise level of 66 dB L_{max}).

Based on the above reference noise levels and truck trip assumptions above, and assuming standard spherical spreading loss (-6 dB per doubling of distance), on-site delivery truck circulation noise exposure at the nearest existing and future residential uses was calculated and the results of those calculations are presented in Table 7.

Table 7
Predicted On-Site Delivery Truck Circulation Noise Levels at Nearest Residential Property Lines

APN ¹	Land Use	Distance from Circulation Route (ft) ²	Predicted Noise Levels (dBA) ³	
			L_{eq}	L_{max}
490-190-011	Existing SFR	165	27	50
490-100-031	Existing SFR	160	28	51
490-010-026	Future MDR	210	31	54
490-010-024	Future HDR	30	48	70
Applicable General Plan Daytime Noise Standards			55	75
Applicable WRSP Noise Standards			50	70
¹ Locations of nearest residential uses are shown on Figures 1 and 2. ² Distances scaled from (assumed) on-site truck circulation route to residential property lines using the provided site plans. On-site truck circulation route shown on Figure 2. ³ Predicted noise levels at nearest existing residential uses include consideration of the screening provided by existing sound walls, as discussed in this report. Source: Bollard Acoustical Consultants, Inc. (2020)				

The Table 7 data indicate that project on-site delivery truck circulation noise exposure is predicted to satisfy the applicable City of Roseville General Plan daytime hourly average (L_{eq}) and maximum (L_{max}) noise level standards at the nearest existing and future residential uses. In addition, project on-site delivery truck circulation noise levels are also predicted to satisfy the hourly average and maximum noise level standards identified in MM 4.5-3 of the WRSP Mitigation Monitoring Program. As a result, no further consideration of noise mitigation measures would be warranted for this aspect of the project.

Mechanical Equipment (HVAC)

Heating, ventilating, and air conditioning (HVAC) requirements for the proposed coffee kiosk building will most likely be met using a packaged roof-mounted system. The location of the coffee kiosk building is shown on Figure 2.

Pursuant to MM 4.5-3(b), roof-top HVAC equipment shall be oriented away from residential areas and systems shall not produce noise levels that exceed 50 dB at a distance of 25 feet. In addition, roof-top parapets shall block line-of-sight of HVAC equipment from noise-sensitive uses. Assuming that the project HVAC equipment has reference noise level of 50 dB at 25 feet, and assuming standard spherical spreading loss (-6 dB per doubling of distance), project HVAC equipment noise exposure at the property lines of the nearest existing and proposed residential uses was calculated and the results of those calculations are presented in Table 8.

To account for the screening that would be provided by the building parapets that would break line-of-sight of the equipment (as required by MM 4.5-3), HVAC equipment noise levels at the nearest existing and future residential uses have been adjusted by -5 dB.

Table 8
Predicted Rooftop HVAC Equipment Noise Levels at Nearest Residential Property Lines

APN ¹	Land Use	Distance from Building (feet) ²	Predicted Noise Levels, L_{eq} (dBA) ³
490-190-011	Existing SFR	175	22
490-100-031	Existing SFR	200	22
490-010-026	Future MDR	200	27
490-010-024	Future HDR	40	41
Applicable General Plan Daytime Noise Standard			55
Applicable General Plan Nighttime Noise Standard			45

¹ Locations of nearest residential uses are shown on Figures 1 and 2.
² Distances scaled from coffee kiosk building roof (elevated position) to residential property lines (ground level) using the provided site plans. Building location is shown on Figure 2.
³ Predicted noise levels at nearest existing residential uses include consideration of the screening provided by existing sound walls, and an offset of -5 dB to account for building parapet screening, as discussed in this report.
Source: Bollard Acoustical Consultants, Inc. (2020)

Because mechanical equipment operation typically generates sustained, steady-state noise levels, impacts of project rooftop mechanical equipment are assessed in this study relative to the applicable City of Roseville General Plan hourly average (L_{eq}) noise level standards.

As indicated in Table 8, project HVAC equipment noise exposure is predicted to range from 22-41 dB L_{eq} at the property lines of the nearest existing and future residential uses, and would satisfy the City of Roseville General Plan daytime and nighttime hourly average noise level standards. Therefore, provided that the project complies with the HVAC equipment and orientation criteria identified in MM 4.5-3 of the WRSP Mitigation Monitoring Program (as required), additional consideration of mitigation measures would not be warranted for this aspect of the project.

Conclusions

Provided that the project complies with the commercial land use criteria identified in MM 4.5-3 of the West Roseville Specific Plan Mitigation Monitoring Program (as required), noise levels associated with operations at the proposed Parcel W-20 Coffee Kiosk are predicted to comply with the daytime hourly average and maximum noise level criteria contained in the City of Roseville General Plan and the West Roseville Specific Plan Mitigation Monitoring Program. However, it is possible that project drive-through operations noise level exposure could exceed the applicable City of Roseville General Plan nighttime hourly average noise level standards at the adjacent future high-density residential parcel (APN: 490-010-024) should they occur during nighttime hours (10:00 p.m. to 7:00 a.m.).

In order to satisfy the applicable City of Roseville General Plan nighttime hourly average noise level standards at APN: 490-010-024, one of the following specific noise mitigation measures are recommended:

1. The construction of a 10' solid noise barrier along the southern project property boundary. Figure 2 shows the location of the recommended noise barrier. The solid barrier could consist of either masonry or precast concrete panels.

OR

2. Limit drive-through operations to daytime hours only (7:00 a.m. to 10:00 p.m.).

These conclusions are based on the site plan shown on Figure 2, BAC reference noise level measurements conducted at a similarly configured drive-through restaurants in the Sacramento area in recent years, and noise level data from equipment manufacturers. Deviations from the above-mentioned resources could cause actual noise levels to differ from those predicted in this assessment.

This concludes BAC's environmental noise assessment of drive-through operations for the proposed Parcel W-20 Coffee Kiosk located in Roseville, California. Please contact BAC at (916) 663-0500 or dariog@bacnoise.com with any questions regarding this assessment.

Appendix A Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound. A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
IIC	Impact Insulation Class (IIC): A single-number representation of a floor/ceiling partition's impact generated noise insulation performance. The field-measured version of this number is the FIIC.
L_{dn}	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
L_{max}	The highest root-mean-square (RMS) sound level measured over a given period of time.
Loudness	A subjective term for the sensation of the magnitude of sound.
Masking	The amount (or the process) by which the threshold of audibility is for one sound is raised by the presence of another (masking) sound.
Noise	Unwanted sound.
Peak Noise	The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the "Maximum" level, which is the highest RMS level.
RT₆₀	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
STC	Sound Transmission Class (STC): A single-number representation of a partition's noise insulation performance. This number is based on laboratory-measured, 16-band (1/3-octave) transmission loss (TL) data of the subject partition. The field-measured version of this number is the FSTC.





A

B

C

D

Legend

- A: LT-1: Facing south along Upland Drive
- B: LT-1: Facing north along Upland Drive
- C: LT-1: Existing 7' solid wall along residential property boundary
- D: LT-2: Facing south towards Pleasant Grove Boulevard near 6' existing solid wall

Parcel W-20 Coffee Kiosk
Roseville, California

Photographs of Survey Locations

Appendix B



Appendix C-1
Ambient Noise Monitoring Results - Site LT-1
Parcel W-20 Coffee Kiosk - Roseville, California
Tuesday, October 27, 2020

Hour	Leq	Lmax	L50	L90
12:00 AM	50	75	43	37
1:00 AM	46	65	36	30
2:00 AM	48	73	34	29
3:00 AM	49	66	41	32
4:00 AM	55	75	48	40
5:00 AM	60	74	56	50
6:00 AM	64	86	62	56
7:00 AM	64	78	63	59
8:00 AM	63	74	62	56
9:00 AM	61	76	59	49
10:00 AM	60	75	58	46
11:00 AM	60	71	58	45
12:00 PM	61	86	58	46
1:00 PM	61	80	59	46
2:00 PM	61	83	58	46
3:00 PM	61	73	59	48
4:00 PM	61	73	60	51
5:00 PM	62	75	61	53
6:00 PM	63	84	61	54
7:00 PM	61	72	59	52
8:00 PM	60	79	58	53
9:00 PM	59	72	57	52
10:00 PM	58	78	55	51
11:00 PM	56	75	53	48

Statistical Summary						
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	64	59	61	64	46	57
Lmax (Maximum)	86	71	77	86	65	74
L50 (Median)	63	57	59	62	34	48
L90 (Background)	59	45	50	56	29	41

Leq (Average)
Lmax (Maximum)
L50 (Median)
L90 (Background)

Computed DNL, dB	65
% Daytime Energy	80%
% Nighttime Energy	20%

GPS Coordinates	38°45'59.79" N
	121°21'45.76" W

Appendix C-2
Ambient Noise Monitoring Results - Site LT-2
Parcel W-20 Coffee Kiosk - Roseville, California
Tuesday, October 27, 2020

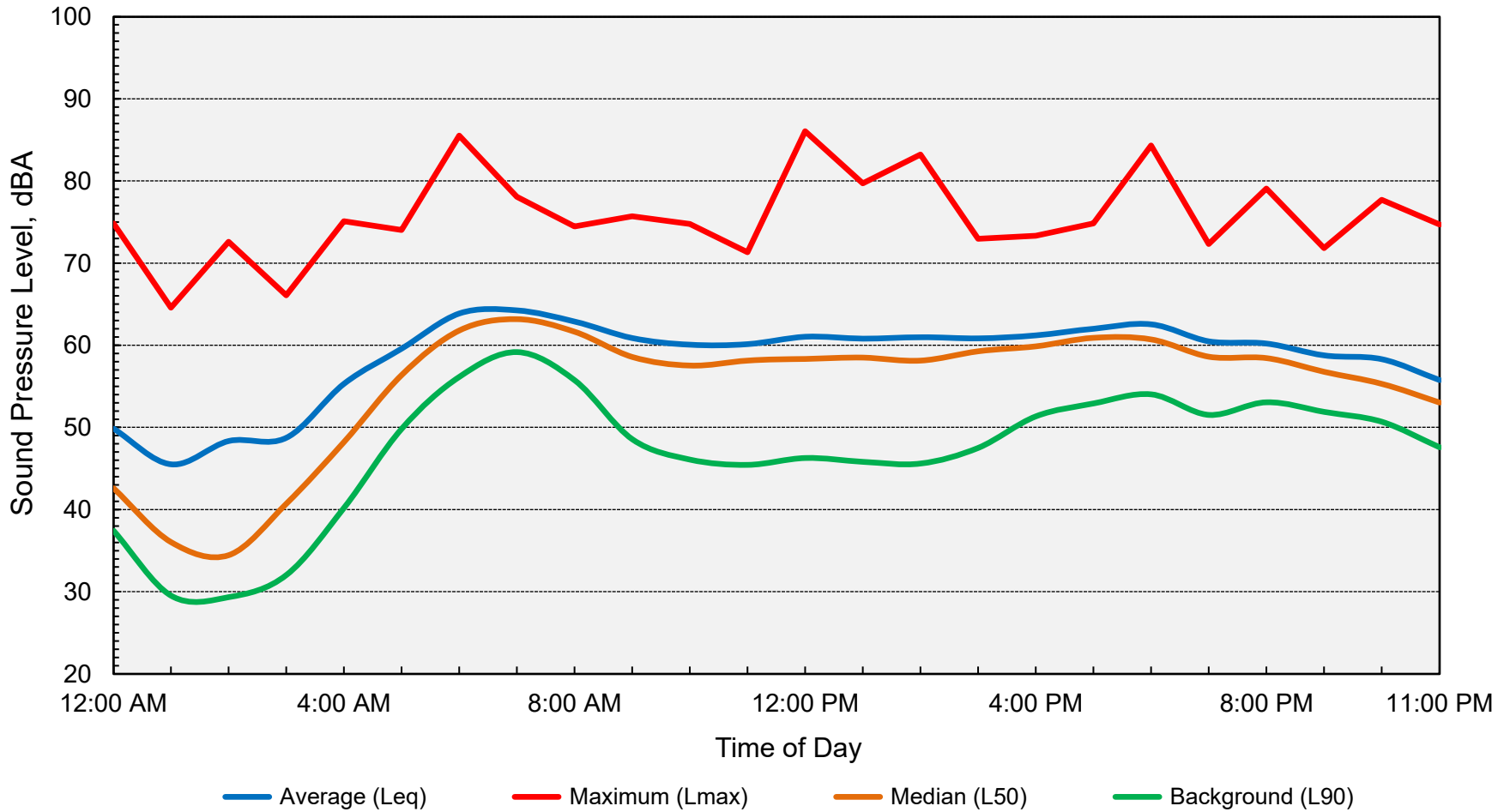
Hour	Leq	Lmax	L50	L90
12:00 AM	56	80	46	41
1:00 AM	53	72	37	28
2:00 AM	55	79	32	29
3:00 AM	52	70	38	31
4:00 AM	58	75	47	39
5:00 AM	62	77	56	47
6:00 AM	67	90	64	54
7:00 AM	68	82	65	57
8:00 AM	67	80	65	55
9:00 AM	67	84	64	50
10:00 AM	66	78	64	49
11:00 AM	67	77	65	52
12:00 PM	68	86	65	51
1:00 PM	67	80	65	49
2:00 PM	68	92	65	49
3:00 PM	67	80	65	51
4:00 PM	67	79	65	52
5:00 PM	68	82	66	53
6:00 PM	67	82	65	52
7:00 PM	65	80	61	49
8:00 PM	64	82	60	50
9:00 PM	63	77	57	49
10:00 PM	61	85	53	47
11:00 PM	58	75	49	44

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	68	63	67	67	52	61
Lmax (Maximum)	92	77	81	90	70	78
L50 (Median)	66	57	64	64	32	47
L90 (Background)	57	49	51	54	28	40

Computed DNL, dB	69
% Daytime Energy	87%
% Nighttime Energy	13%

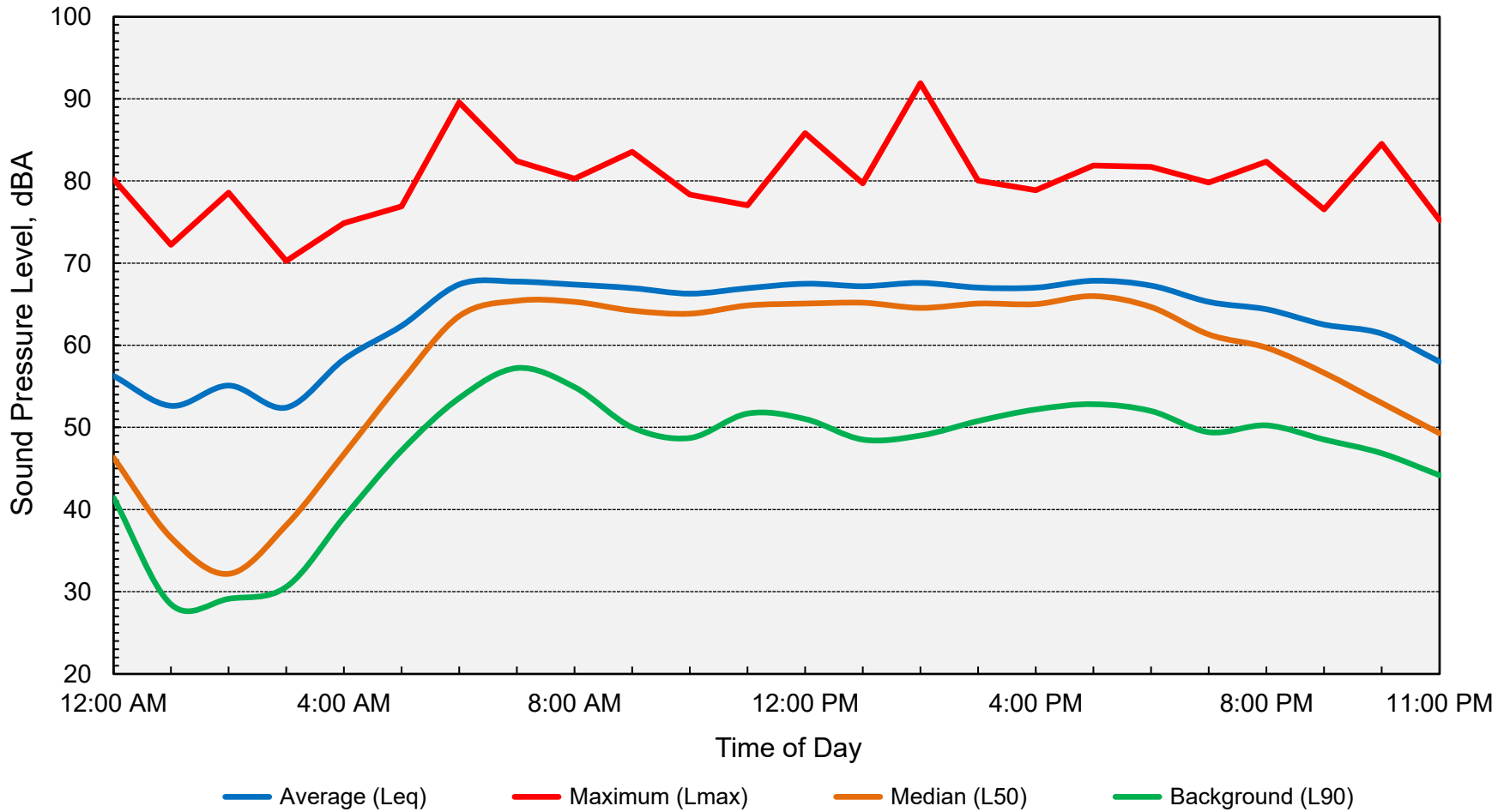
GPS Coordinates	38°46'01.16" N
	121°21'42.60" W

Appendix D-1
Ambient Noise Monitoring Results - Site LT-1
Parcel W-20 Coffee Kiosk - Roseville, California
Tuesday, October 27, 2020



Computed DNL = 65 dB

Appendix D-2
Ambient Noise Monitoring Results - Site LT-2
Parcel W-20 Coffee Kiosk - Roseville, California
Tuesday, October 27, 2020



Computed DNL = 69 dB

Appendix E

Drive-Through Speaker Reference Noise Level Data

HME

Customer Driven

Memo

Re: Drive-Thru Sound Pressure Levels From the Menu Board or Speaker Post

The sound pressure levels from the menu board or speaker post are as follows:

1. Sound pressure level (SPL) contours (A weighted) were measured on a typical HME SPP2 speaker post. The test condition was for pink noise set to 84 dBA at 1 foot in front of the speaker. All measurements were conducted outside with the speaker post placed 8 feet from a non-absorbing building wall and at an oblique angle to the wall. These measurements should not be construed to guarantee performance with any particular speaker post in any particular environment. They are typical results obtained under the conditions described above.
2. The SPL levels are presented for different distances from the speaker post:

Distance from the Speaker (Feet)	SPL (dBA)
1 foot	84 dBA
2 feet	78 dBA
4 feet	72 dBA
8 feet	66 dBA
16 feet	60 dBA
32 feet	54 dBA

3. The above levels are based on factory recommended operating levels, which are preset for HME components and represent the optimum level for drive-thru operations in the majority of the installations.

Also, HME incorporates automatic volume control (AVC) into many of our Systems. AVC will adjust the outbound volume based on the outdoor, ambient noise level. When ambient noise levels naturally decrease at night, AVC will reduce the outbound volume on the system. See below for example:

Distance from Outside Speaker	Decibel Level of standard system with 45 dB of outside noise <u>without</u> AVC	Decibel level of standard system with 45 dB of outside noise <u>with</u> AVC active
1 foot	84 dBA	60 dBA
2 feet	78 dBA	54 dBA
4 feet	72 dBA	48 dBA
8 feet	66 dBA	42 dBA
16 feet	60 dBA	36 dBA

If there are any further questions regarding this issue please contact HME customer service at 1-800-848-4468.

Thank you for your interest in HME's products.

Memorandum

Date: January 13, 2021
To: Jack Varozza, City of Roseville
From: Greg Behrens, John Gard, Tinotenda Jonga, Emily Alice Gerhart, Fehr & Peers
Subject: **Traffic Study for Coffee Shack Project in Roseville, CA**

RS20-3985

This memorandum presents the analysis and conclusions of our traffic study for the proposed Coffee Shack project, which would be located at 1875 Pleasant Grove Boulevard in the southeast quadrant of the Pleasant Grove Boulevard/Upland Drive intersection. The proposed project would be a drive-through coffee store with a single drive-through window and no indoor seating.

Project Site Setting

Figure 1 shows the project site location and study area. The project site is located on a vacant lot at the southeast corner of the Pleasant Grove Boulevard/Upland Drive intersection, approximately 750 feet west of Fiddymment Road.

Along the project site frontage, Pleasant Grove Boulevard consists of four lanes and has a posted speed limit of 45 miles per hour (MPH). Base on engineering speed surveys provided by the City, a design speed of 50 MPH was chosen based on the 85th percentile speed. The City of Roseville General Plan identifies Pleasant Grove Boulevard as a minor arterial within the vicinity of the project site.

Upland Drive is a two-lane collector located on the western edge of the project site. Upland Drive will eventually extend south into the Sierra Vista Specific Plan area, but is currently a stub street ending approximately 180 feet south of Pleasant Grove Boulevard. The Pleasant Grove Boulevard/Upland Drive intersection is side-street stop controlled and includes left-turn lanes in the northbound and westbound directions. The intersection is planned for signalization in the future.

Sidewalks and Class II bike lanes are provided on both sides of Pleasant Grove Boulevard and Upland Drive within the project site vicinity.



Methodology

This study analyzes traffic conditions at the study intersection using Level of Service (LOS) as a measure of operational performance. LOS is a qualitative measure of traffic flow from the perspective of motorists and is an indication of the comfort associated with driving. Typical factors that affect LOS include speed, travel time, and traffic interruptions. Empirical LOS criteria and methods of calculation have been documented in the *Highway Capacity Manual, 6th Edition* (Transportation Research Board, 2016). LOS is a letter classification system, from A (representing free-flow traffic conditions) to F (oversaturated conditions where traffic demand exceeds capacity, resulting in long queues and delays). These methodologies were implemented using Synchro 10 software.

This study analyzes AM and PM peak hour operations at the following intersection:

1. Pleasant Grove Boulevard/Upland Drive

This study reports several maximum queue lengths for critical turning movements at and near the project site, including the following:

- Westbound left-turn at Pleasant Grove Boulevard/Upland Drive
- Northbound right-turn at the Pleasant Grove project driveway

Traffic operations for this study were analyzed using SimTraffic 10 simulation software, which accounts for interactions between intersections, queue spillback, vehicle platooning, etc. The program also produces more accurate estimates of vehicular queuing (when compared to more deterministic methods).

Applicable LOS Policies

Per the *City of Roseville General Plan Circulation Element*, a LOS "C" standard at a minimum of 70 percent of all signalized intersections and roadway segments in the City during the AM and PM peak hours ought to be maintained. Exceptions to the LOS "C" standard may be considered where improvements required to achieve the standard would adversely affect pedestrian, bicycle, or transit access, and where feasible LOS improvements and travel demand-reducing strategies have been exhausted.

Data Collection

Peak hour intersection turning movement counts at Pleasant Grove Boulevard/Fiddymont Road and Pleasant Grove Boulevard/Monument Drive were obtained from the City of Roseville Turning Movement Volume/Occupancy Report online database to determine existing peak hour traffic volumes at Pleasant Grove Boulevard/Upland Drive and on Pleasant Grove Boulevard along the project site frontage. Weekday peak hour intersection turning movement counts were derived from an average of Tuesdays, Wednesdays, and Thursdays during October 2019 to represent pre-COVID conditions.



Analysis Scenarios

The study considers the effects of the project under both Existing Plus Project and Cumulative Plus Project conditions. The Existing Plus Project scenario considers the development of the project without any additional changes to the surrounding land use and transportation characteristics.

The Cumulative Plus Project scenarios considers the development of the project alongside land use and transportation system changes through 2035 as identified in the City of Roseville General Plan. Notably, this scenario includes the extension of Upland Drive south into the Sierra Vista Specific Plan area as well as the signalization of the Pleasant Grove Boulevard/Upland Drive intersection.

Project Site Plan

Figure 2 shows the project site plan (*Preliminary Site Plan*, Baker Williams Engineering Group, October 2020). The proposed project would be a drive-through coffee store with a single drive-through window and no indoor seating. The project would provide 14 on-site vehicle parking spaces. Access to the project site would be provided via a single right-in/right-out (RIRO) driveway on Pleasant Grove Boulevard. The driveway would be side-street stop-controlled.

Project Travel Characteristics

Trip Generation

Table 1 presents the estimated project trip generation.

Project trip generation was estimated based on data collected at Dutch Bros drive-through coffee stores in the Sacramento region. PM peak period trip generation counts were collected at the following two facilities on Wednesday, February 5, 2020 from 2:45 PM to 5:30 PM (in order to capture both spikes in attendance after nearby high schools had released, as well as when adjacent street traffic is busiest):

- Dutch Bros coffee store located at 1225 Baseline Road in Roseville, CA
- Dutch Bros coffee store located at 8610 Elk Grove Boulevard in Elk Grove, CA

Amongst many drive-through coffee stores that exist in the Sacramento region, these facilities are appropriate for this study because they share similar operating/design characteristics to that of the proposed project. They both consist of a single drive-through window, provide no indoor seating, and have building sizes that are very similar to that of the proposed project (less than 1,000 square feet). By controlling for these variables, any uncertainties associated with the effects of multiple service windows and smaller/larger building sizes are eliminated.

These sites yielded nearly identical PM peak hour trip generation totals of 162 trips (gross).



The February 2020 trip generation counts did not include AM peak hour observations. Therefore, additional data collection was completed in November 2020 to estimate project trip generation during the AM peak hour. Drive-through counts were collected from 7 AM to 7 PM at the following two facilities on Thursday, November 5, 2020:

- Dutch Bros coffee store located at 1225 Baseline Road in Roseville, CA
- Dutch Bros coffee store located at 715 Sunrise Avenue in Roseville, CA

Because the November 2020 data was collected during the COVID-19 pandemic, adjustments were required in order to estimate pre-COVID conditions. To accomplish this, the November 2020 trip generation data was used to establish an AM-to-PM peak hour trip generation factor. Based on this process, the AM-to-PM peak hour trip generation factor was determined to be 1.1 (i.e., 11 AM peak hour trips for every 10 PM peak hour trips). This factor was applied to the PM peak hour trips derived from the February 2020 trip generation data, which yielded an AM peak hour trip generation estimate of 180 trips (gross).

Table 1 includes reductions for pass-by trips. Pass-by trips are trips already on the network that are diverted to and from a commercial or retail land use, and therefore would not be considered as new trips generated by the project. Pass-by trips were estimated from data presented in the *Trip Generation Handbook, 3rd Edition* (Institute of Transportation Engineers, 2017). For the drive-through, the relevant ITE land use category (Coffee/Donut Shop with Drive-Through Window) has a pass-by rate of 89 percent. However, the studies used for this calculation are dated (around 20 years old), so a pass-by rate of 70 percent was applied for drive-through trips. This approach is conservative because fewer pass-by trips implies a greater percentage of project trips are “new,” which means they are added to the surrounding roadway system.

After accounting for pass-by trip reductions, the project would generate an estimated 54 net new external vehicle trips during the AM peak hour and 48 net new vehicle trips during the PM peak hour.

Table 1: Project Trip Generation

Land Use	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Dutch Bros Coffee Drive-Through (observed) ¹	90	90	180	81	81	162
Total Gross Trips	90	90	180	81	81	162
<i>Pass-By Trip Reduction</i> ²	-63	-63	-126	-57	-57	-114
Net New External Trips	27	27	54	24	24	48

Notes:

1. Derived from trip generation observations at comparable drive-through coffee stores in February and November 2020.
2. Pass-by trips estimated by Fehr & Peers and applied on similar drive-through coffee store studies.

Source: Fehr & Peers, 2020.



Trip Distribution and Trip Assignment

The trip distribution and assignment of the project under Existing Plus Project conditions was estimated based on current travel patterns, permitted turning movements, and complementary land uses. For Cumulative Plus Project conditions, project trip distribution was estimated by performing a select zone analysis of the project site using the City of Roseville cumulative year travel demand model. These processes considered the opportunity for westbound U-turn movements at the Pleasant Grove Boulevard/Upland Drive intersection for inbound project trips traveling from the east.

Pass-by trip assignments considered the relative volume of traffic on Pleasant Grove Boulevard and Fiddymment Road, and the ease of performing pass-by movements.

Table 2 summarizes the estimated project trip distribution.

Table 2: Project Trip Distribution

Direction	Existing Plus Project				Cumulative Plus Project			
	AM		PM		AM		PM	
	In	Out	In	Out	In	Out	In	Out
Pleasant Grove Blvd to/from the east	71%	86%	83%	72%	66%	78%	66%	67%
Pleasant Grove Blvd to/from the west	29%	14%	17%	28%	24%	15%	24%	24%
Upland Drive to/from the south	-	-	-	-	10%	7%	10%	9%

Source: Fehr & Peers, 2020.



Intersection Operations

Table 3 presents the peak hour average delay and LOS at the Pleasant Grove Boulevard/Upland Drive intersection. The intersection would operate at LOS C or better during both the AM or PM peak hours under Existing Plus Project and Cumulative Plus Project conditions.

Table 3: Pleasant Grove Boulevard/Upland Drive - Peak Hour Intersection Operations

Intersection	Traffic Control	AM		PM	
		Delay ¹	LOS ²	Delay ¹	LOS ²
Existing Plus Project Conditions					
Pleasant Grove Boulevard/Upland Drive	Side Street Stop Control (WB Left/U-Turn)	16	C	12	B
Cumulative Plus Project Conditions					
Pleasant Grove Boulevard/Upland Drive	Signal	13	B	11	B
Notes:					
1. Delay is reported as seconds per vehicle. Values are rounded to the nearest whole number so the same delay may represent two different LOS conditions if the delay is within 0.5 seconds of the LOS. Average control delay for signalized intersections is the weighted average for all movements. Delay for side street stop controlled intersections is reported by movement.					
2. "LOS" represents level of service, calculated based on methodologies contained in the <i>Highway Capacity Manual, 6th Edition</i> (Transportation Research Board, 2016).					
Source: Fehr & Peers, 2020.					

Table 4 presents the peak hour maximum queue for the critical westbound left-turn movement at the Pleasant Grove Boulevard/Upland Drive intersection. The peak hour maximum queue would be accommodated within the available storage during both the AM and PM peak hours under Existing Plus Project and Cumulative Plus Project conditions.

Table 4: Pleasant Grove Boulevard/Upland Drive – Maximum Queue Lengths

Intersection	Movement	Storage	Maximum Queue (vehicles)	
			AM	PM
Existing Plus Project Conditions				
Pleasant Grove Boulevard/Upland Drive	WB Left/U-Turn	250 ft.	75 ft. (3 vehicles)	75 ft. (3 vehicles)
Cumulative Plus Project Conditions				
Pleasant Grove Boulevard/Upland Drive	WB Left/U-Turn	250 ft.	100 ft. (4 vehicles)	150 ft. (6 vehicles)
Note: Queue lengths are rounded up to the nearest 25 feet.				
Source: Fehr & Peers, 2020.				



Project Access and On-Site Circulation

This section evaluates the access and on-site circulation components of the project relative to standards established in the *City of Roseville Design and Construction Standards* from January 2020.

Project Driveway Design

Driveway Spacing

The project driveway would be located 280 feet east of the Pleasant Grove Boulevard/Upland Drive intersection, as measured from the intersection centerline to the driveway centerline. According to City staff, driveways on arterial streets must be placed at least 250 feet from the adjacent upstream intersection (refer to Section 5-3). Therefore, the project driveway would meet the City's minimum driveway spacing requirement.

Driveway Throat Width

The project driveway would have a throat width of 35 feet. The City requires that driveways for commercial uses have a minimum throat width of 35 feet (refer to Section 7-14). Therefore, the project driveway would meet the City's minimum driveway throat width requirement.

Driveway Throat Depth

It is important that driveways be designed with adequate throat depth to accommodate exiting traffic, such that blockages to incoming traffic are minimized. Such blockages could cause inbound traffic to spill back onto public streets, which could increase conflicts with other vehicles and modes of travel.

Based on the configuration of the driveway and its placement relative to the on-site drive-through exit and drive aisles, the driveway would provide approximately 100 feet of storage for outbound vehicle queues. In other words, the outbound vehicle queue could extend 100 feet before interfering with on-site circulation.

Table 5 displays the estimated peak hour maximum queue for outbound vehicle movements at the project driveway. The peak hour maximum queue would be accommodated within the available storage during both the AM and PM peak hours under Existing Plus Project and Cumulative Plus Project conditions. Note that the AM peak hour maximum queue would decrease between Existing Plus Project and Cumulative Plus Project conditions due to the planned traffic signal at the Pleasant Grove/Upland Drive intersection. The signalization of this intersection would increase the gaps in eastbound traffic on Pleasant Grove Boulevard along the project site frontage, improving the ease with which vehicles could exit the project site.



Table 5: Project Driveway – Outbound Maximum Queue Lengths

Intersection	Movement	Storage	Maximum Queue (vehicles)	
			AM	PM
Existing Plus Project Conditions				
Pleasant Grove Boulevard Driveway	NB Right-Turn	100 ft.	100 ft. (4 vehicles)	75 ft. (3 vehicles)
Cumulative Plus Project Conditions				
Pleasant Grove Boulevard Driveway	NB Right-Turn	100 ft.	75 ft. (3 vehicles)	75 ft. (3 vehicles)
Note: Queue lengths are rounded up to the nearest 25 feet. Source: Fehr & Peers, 2020.				

Driveway Corner Sight Distance

The City requires that corner sight distance be provided for vehicles exiting intersections and driveways (refer to Section 7-12). **Figure 3** illustrates the corner sight distance for vehicles exiting the project driveway onto Pleasant Grove Boulevard. As shown this line of sight is generally unobstructed except for the landscape strip immediately west of the project site. The recommended right-turn deceleration lane (refer to “Need for Right-Turn Deceleration” section) would eliminate the landscape strip on the project frontage west of the project driveway, thus clearing the potential line of sight obstruction shown in Figure 3.

Other Driveway Design Considerations

The site plan does not provide sufficient detail to determine the driveway treatment at the point at which it meets Pleasant Grove Boulevard. The City requires that commercial driveways on arterial streets be designed as Type A-7 driveways (refer to Section 7-14 and Detail ST-22). Therefore, the following is recommended:

- Construct the driveway as a Type A-7 driveway (refer to Detail ST-22).
- Construct the driveway with a corner radius of 25 feet to accommodate large truck maneuvers in/out of the project site, as discussed below in the “Large Truck Circulation” section. Note that this corner radius is recommended in combination with the construction of a right-turn deceleration lane, as discussed below in the “Need for Right-Turn Deceleration” section. A wider corner radius of 30 feet would be necessary to accommodate large truck maneuvers without the provision of a right-turn deceleration lane.



Drive-Through Queue Storage

The project site plan states that the drive-through lane would provide 395 feet of storage. However, the project site plan illustrates that the vehicle queue would extend past the drive-through lane entry point. The last vehicle shown in this queue (labeled #22 on the project site plan) would impede the path of travel for vehicles entering the site as they travel towards parking located on the westerly portion of the project site. A measurement of the drive-through lane storage between the entry point (located approximately at the rear of vehicle #21 labeled on the project site plan) and the service window indicates that the drive-through lane would provide 380 feet of storage.

The City requires that the storage requirements for drive-through projects be evaluated at 25 feet per vehicle (refer to Section 4-5). However, queue observations at existing Dutch Bros stores in Roseville indicate that drive-through queues for comparable drive-through coffee stores measure at approximately 20 feet per vehicle. This closer vehicle spacing could be attributed to the longer waits, stop-and-go queue progression, extremely low truck/large vehicle percentage (if any), and very low travel speeds of drive-through operations when compared to typical vehicle operations on public roadways. Therefore, for the purposes of this analysis, it is recommended that project drive-through queue storage needs be evaluated at 20 feet per vehicle. Based on this methodology, the project drive-through lane would provide 380 feet of storage for up to 19 vehicles.

To estimate maximum queue lengths for the project drive-through lane, maximum drive-through queue observations were conducted between 7 AM and 7 PM on Thursday, November 5, 2020 at the following locations:

- Dutch Bros coffee store located at 1225 Baseline Road in Roseville, CA
- Dutch Bros coffee store located at 715 Sunrise Avenue in Roseville, CA

The maximum drive-through queue observed at the Sunrise Avenue Dutch Bros store was 13 vehicles and the maximum drive-through queue observed at the Baseline Road Dutch Bros store was 21 vehicles. Therefore, if the project would be expected to generate levels of customer activity (and on-site employee order fulfillment efficiency) similar to the Sunrise Avenue Dutch Bros store, the project would provide sufficient drive-through storage to accommodate the maximum queue. However, if the project would be expected to generate levels of customer activity similar to the Baseline Road Dutch Bros store, the maximum drive-through queue would exceed the available storage by two vehicles.

Vehicles that exceed the drive-through queue storage would impede the path of travel for vehicles entering the project site. It is important to note that the maximum drive-through queue at the Baseline Road Dutch Bros store exceeded 19 vehicles (the available drive-through storage for the proposed project) for only two five-minute intervals during the entirety of the 7 AM to 7 PM observation period. This represents just over



one percent of the 145 five-minute intervals recorded during the maximum drive-through queue observations. Therefore, while it is conceivable that the maximum drive-through queue would exceed the available drive-through storage for the proposed project, this condition would likely occur only during brief periods of heavy visitation and would not persist for extended periods of time.

In order to reduce the likelihood of the drive-through queue extending back onto Pleasant Grove Boulevard, the following is recommended:

- Widen the project driveway to a width of 40 feet and provide two inbound lanes and one outbound lane. Install "Drive Thru" pavement markings in the westerly inbound lane.

Westbound U-Turn Movements at Pleasant Grove Boulevard/Upland Drive

The location of the project site combined with its right-in/right-out driveway would require inbound vehicles traveling from the east to complete a westbound U-turn movement at the Pleasant Grove Boulevard/Upland Drive intersection in order to access the site. As such, the project would add considerable traffic volumes to this U-turn movement.

U-Turn Turning Radius

The geometry of this U-turn movement was reviewed to evaluate its consistency with City standards. The distance between the left lane line of the westbound left-turn pocket (from which U-turns would be completed) to the southerly face of curb on Pleasant Grove Boulevard is 33 feet (refer to **Figure 4**). The distance between the right lane line of the westbound left-turn pocket to the southerly face of curb on Pleasant Grove Boulevard is 44 feet. The radius of the southeast corner of the Pleasant Grove Boulevard/Upland Drive intersection is 51 feet. These conditions satisfy City standards for permitted U-turn movements for westbound Pleasant Grove Boulevard at Upland Drive (refer to Detail TS-15).

U-Turn Sight Distance

Pursuant to City standards (refer to Section 7-12) and the 2011 American Association of State Highway and Transportation Officials (AASHTO) *Geometric Design of Highways and Streets* Chapter 9.5.3 Case F, the required westbound U-turn sight distance is 530 feet. This is measured from the location of a driver preparing to begin a U-turn movement to the location of an object (i.e., an oncoming vehicle) in the center of the approaching lane on eastbound Pleasant Grove Boulevard. As shown in **Figure 4**, the existing median landscaping on the west leg of the Pleasant Grove Boulevard/Upland Drive intersection would obstruct this line of sight due to the horizontal curvature of Pleasant Grove Boulevard. Therefore, the westbound U-turn sight distance would not be adequate.



The following is recommended:

- Maintain the existing median landscaping on the west leg of the Pleasant Grove Boulevard/Upland Drive intersection and routinely prune the existing trees and vegetation to maintain a six-inch to six-foot clear line of sight within the green area shown on Figure 4.

Note that this sight distance issue will be resolved in the future with the installation of a traffic signal at the Pleasant Grove Boulevard/Upland Drive intersection because westbound left- and U-turn movements would be separated from eastbound through movements through signal phasing. However, the precise timing of this signalization is not yet known, and it is conceivable that the project is constructed and operational prior to the installation of the traffic signal.

Need for Right-Turn Deceleration

The City requires provision of right-turn deceleration in circumstances where all of the following conditions are met (refer to Section 5.5):

- The driveway is located on an arterial or expressway.
- Right turn ingress volume is expected to exceed fifty (50) during peak hour flows on the roadway. For right turn ingress volumes between ten (10) and fifty (50) a right turn curb taper shall be constructed in conformance with the Standard Drawings.
- There is ample room and frontage to fit a deceleration lane as determined by the City Engineer.
- The travel speed of the roadway, as determined by the City Engineer, equals or exceeds 45 MPH.

The project driveway meets all applicable conditions warranting construction of a right-turn deceleration lane. The standard right-turn deceleration lane is 200 feet in length plus a 60-foot taper (refer to Detail ST-25). However, there is not adequate distance between the project driveway and the near curb return at the Pleasant Grove Drive/Upland Drive intersection to accommodate the standard right-turn deceleration lane. Therefore, the following is recommended:

- Construct a right-turn deceleration lane on eastbound Pleasant Grove Boulevard approaching the project driveway that is 135 feet in length plus a 60-foot taper.

While this would not adhere to the City standard for a right-turn deceleration lane, it would still provide operational benefit and would be preferred to a right-turn curb flare.



Internal Vehicle Circulation

Passenger Vehicle Circulation

Several on-site parking stalls would be placed in locations that would not be easily accessible for passenger vehicles or that when occupied would impede the path of travel for passenger vehicles circulating within the project site. These include the following:

- Parking stall #10 is situated at an acute angle relative to the westbound parking lot drive aisle. This would require ingressing vehicles to complete a sharp turning maneuver to access the parking stall, while larger vehicles would likely be required to complete a multi-point turn to access the parking stall. These conditions would adversely affect the flow of vehicle traffic within the project site parking lot.
- Parking stalls #11 and #12 are situated immediately in front of the drive-through exit. When occupied, these parking stalls would impede the flow of traffic exiting the drive-through and impede vehicles reversing out of parking stalls #13 and #14. Additionally, parking stalls #11 and #12 are placed in locations that would be more ideally suited for outbound vehicle queues exiting the project driveway.

The following modifications to the site plan are recommended:

- Eliminate parking stalls #10, #11, and #12 shown on the project site plan.

This modification would reduce the number of on-site parking spaces from 14 to 11 spaces. City Code Chapter 19.26.030 requires fast food with drive through establishments to provide one parking space per 100 square feet, equal to nine parking spaces when applied to the project. Therefore, even with the proposed on-site parking reduction, the project would still satisfy City parking requirements.

Large Truck Circulation

Figure 5 illustrates turning movements for refuse trucks (25-foot inside radius and 45-foot outside radius) and **Figure 6** illustrates turning movements for fire and organics trucks (30-foot inside radius and 50-foot outside radius). Large truck movements into the project site would need to be completed from the outside eastbound through lane. The truck swept paths would conflict with the sidewalk and landscape strip immediately west of the project site.

As shown in Figure 6, fire and organics truck paths would conflict with parking stalls #10, #11, and #12 shown on the project site plan.

Large trucks that enter the project site would require multi-point turns using the westerly portion of the project parking lot in order to reverse direction and exit the site facing forward. Similar maneuvers would



be necessary for refuse and organics trucks to access bins located at the southwest corner of the project site. While these maneuvers would be disruptive to circulation patterns within the project parking lot, they would not disrupt parking lot operations for extended durations given the relatively infrequent trips to and from the project site by large trucks.

The following modifications are recommended to better accommodate large truck maneuvers:

- Construct the driveway as a Type A-7 driveway (refer to Detail ST-22).
- Construct the driveway with a corner radius of 25 feet to accommodate large truck maneuvers in/out of the project site (refer to previous note regarding right-turn deceleration lane).
- Eliminate parking stalls #10, #11, and #12 shown on the project site plan.

Vehicle Miles of Travel (VMT)

On September 27, 2013, Governor Jerry Brown signed Senate Bill (SB) 743 into law and started a process intended to fundamentally change transportation impact analysis as part of CEQA compliance. These changes include elimination of auto delay, LOS, and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts. The LOS results presented earlier in this memorandum were prepared to evaluate compliance with the City of Roseville General Plan LOS policy and for informational purposes, but not to determine significant impacts under CEQA per se.

SB 743 contained language directing the Governor's Office of Planning and Research (OPR) to update the CEQA Guidelines to include new criteria (e.g., metrics) for determining the significance of transportation impacts. OPR selected vehicle miles of travel (VMT) as the transportation impact metric, recommended its application statewide, and submitted updates to the CEQA Guidelines that were certified by the Natural Resources Agency in December 2018. The requirements of SB 743 became effective statewide on July 1, 2020. To help aid lead agencies with SB 743 implementation, OPR produced the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018). The *Technical Advisory* helps lead agencies think about the variety of implementation questions they face with respect to shifting to a VMT metric.

Page 17 of the *Technical Advisory* generally describes retail development including stores less than 50,000 square feet as locally-serving. And in the context of CEQA, it concludes that locally-serving retail may be found to cause less-than-significant transportation impacts. The proposed project clearly falls well below this building size threshold. Moreover, given the prevalence of coffee stores (drive-through and walk-in) throughout the City of Roseville and the broad distribution of these coffee stores throughout the City's residential and employment areas, it is expected that the project would similarly cater to local residents and employees and function as a locally-serving establishment. For these reasons, the project is presumed to have a less-than-significant impact to the transportation system on the basis of project-generated VMT, pursuant to guidance provided in the *Technical Advisory*.



Summary & Conclusions

In summary, the analysis of the proposed project revealed the need for the following modifications to the project site plan and surrounding roadway network:

- Construct a right-turn deceleration lane on eastbound Pleasant Grove Boulevard approaching the project driveway that is 135 feet in length plus a 60-foot taper.
- Construct the driveway as a Type A-7 driveway (refer to Detail ST-22) with a corner radius of 25 feet to accommodate large truck maneuvers in/out of the project site.
- Widen the project driveway to a width of 40 feet and provide two inbound lanes and one outbound lane. Install "Drive Thru" pavement markings in the westerly inbound lane.
- Maintain the existing median landscaping on the west leg of the Pleasant Grove Boulevard/Upland Drive intersection and routinely prune the existing trees and vegetation to maintain a six-inch to six-foot clear line of sight within the green area shown on Figure 4.
- Eliminate parking stalls #10, #11, and #12 shown on the project site plan.



References

City of Roseville (January 2020). *City of Roseville Design and Construction Standards*.

Institute of Transportation Engineers (2017). *Trip Generation Handbook, 3rd Edition*.

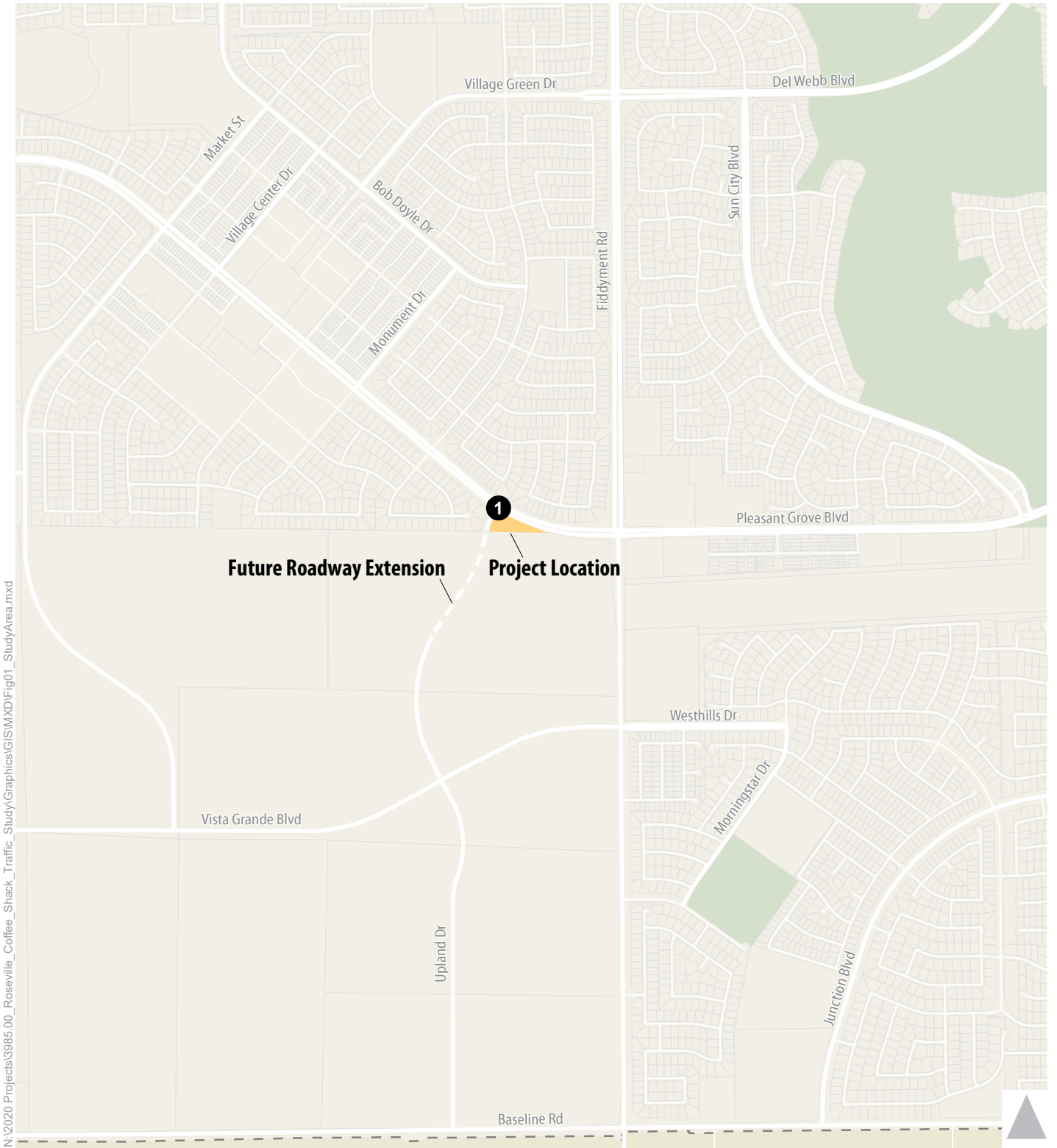
Institute of Transportation Engineers (2017). *Trip Generation Manual, 10th Edition*.

Governor's Office of Planning and Research (December 2018). *Technical Advisory on Evaluating Transportation Impacts in CEQA*.

Transportation Research Board (2016). *Highway Capacity Manual, 6th Edition*.



Appendix A. Figures

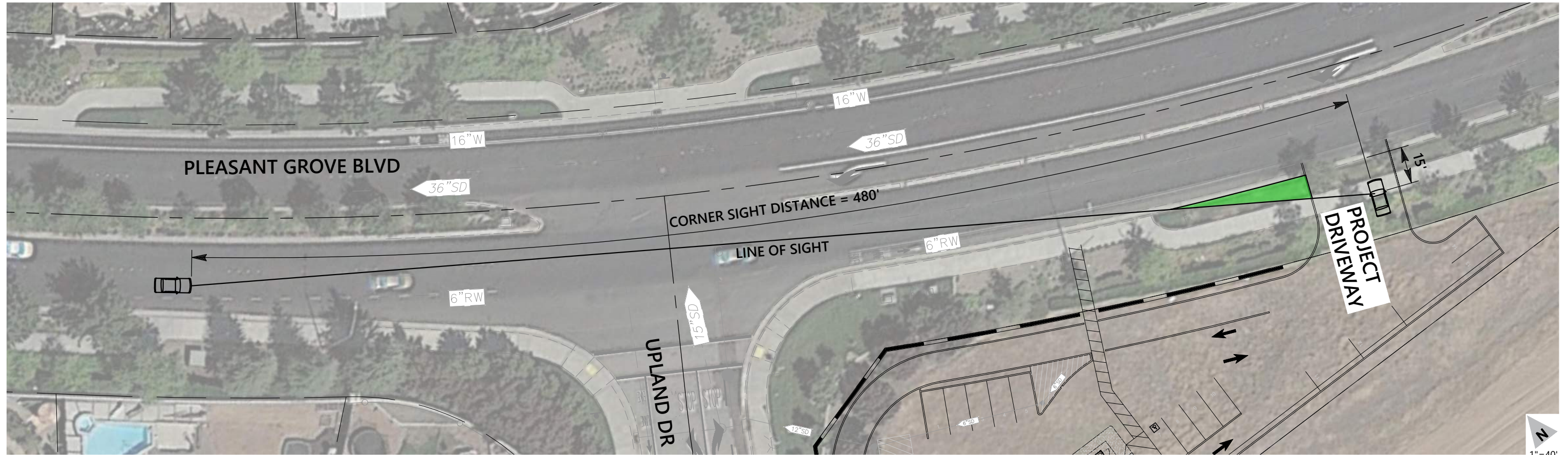


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- 1 Study Intersection
- City Boundary
- Project Location
- Park/Open Space



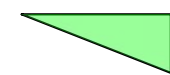
Figure 1
Study Area



CORNER SIGHT DISTANCE



LEGEND



LEFT TURN SIGHT DISTANCE TRIANGLE - DESIGN OF VERTICAL ELEMENTS IN THIS AREA TO BE CONSISTENT WITH HIGHWAY DESIGN MANUAL TOPIC 405.1 (2) AND CITY OF ROSEVILLE DESIGN STANDARDS SECTION 7-12 (C)¹.

DESIGN SPEED

PLEASANT GROVE BOULEVARD - 50 MPH (BASED ON SPEED SURVEY PERFORMED BY THE CITY ON 12/9/2015)

CORNER SIGHT DISTANCE

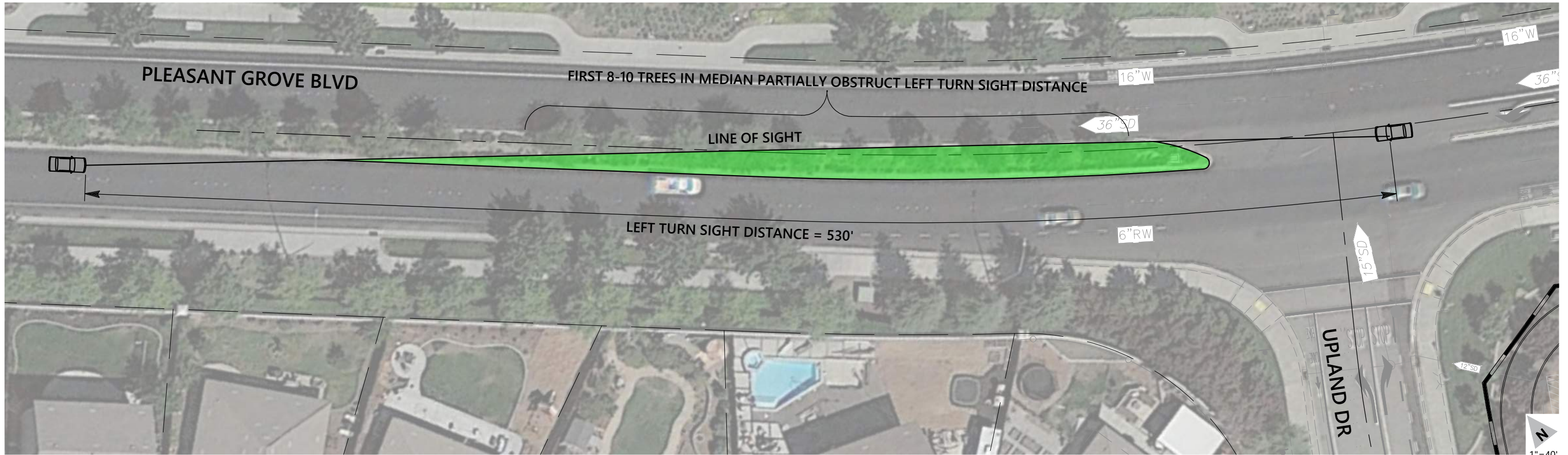
CORNER SIGHT DISTANCE = 480' CALCULATED PER HIGHWAY DESIGN MANUAL TOPIC 405.1 (2).



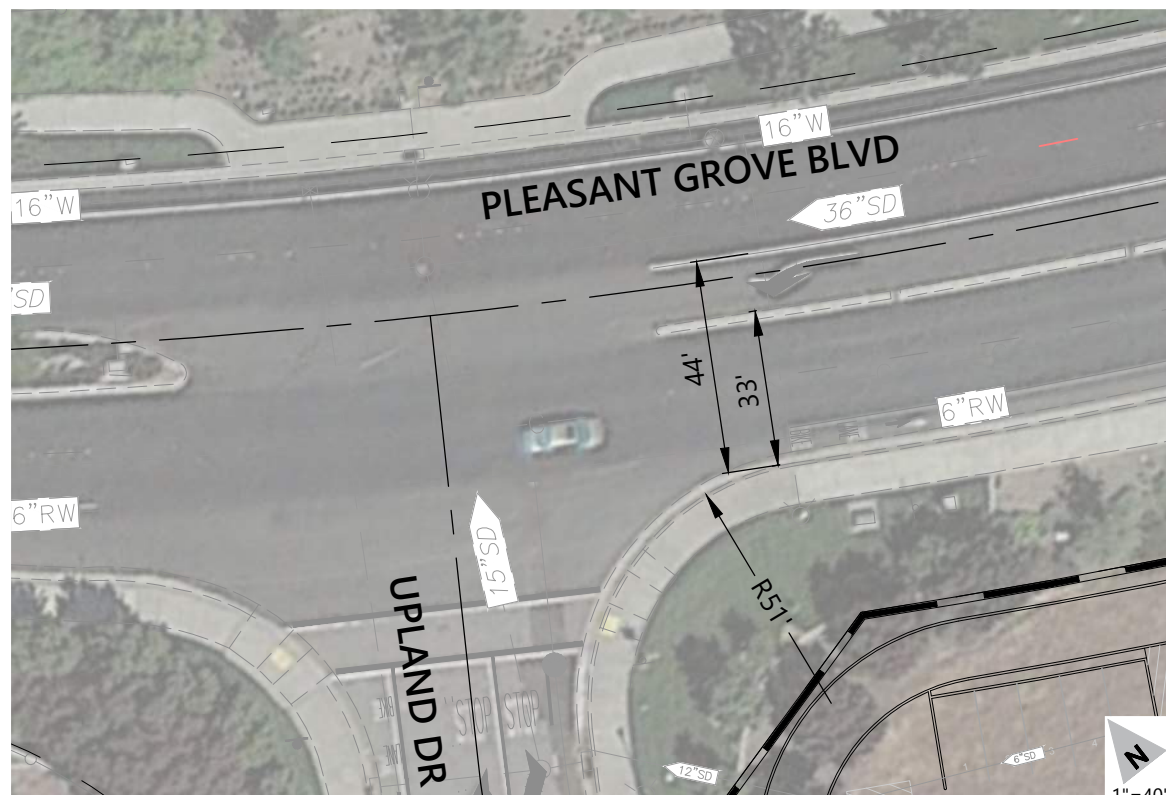
1: SHADED GREEN AREA REPRESENTS PORTION OF PROJECT FRONTAGE SITUATED BETWEEN THE FACE OF CURB AND THE REQUIRED LINE OF SIGHT.

Figure 3

Corner Sight Distance Analysis
Project Driveway at Pleasant Grove Boulevard

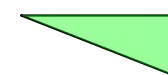


LEFT TURN SIGHT DISTANCE



U-TURN DIMENSIONS

LEGEND



LEFT TURN SIGHT DISTANCE TRIANGLE - DESIGN OF VERTICAL ELEMENTS IN THIS AREA TO BE CONSISTENT WITH 2011 AASHTO GEOMETRIC DESIGN OF HIGHWAYS AND STREETS CHAPTER 9.5.3 CASE F AND CITY OF ROSEVILLE DESIGN STANDARDS SECTION 7-12 (B)¹.

DESIGN SPEED

PLEASANT GROVE BOULEVARD - 50 MPH
(BASED ON SPEED SURVEY PERFORMED BY THE CITY ON 12/9/2015)

LEFT TURN SIGHT DISTANCE

LEFT TURN SIGHT DISTANCE = 530' CALCULATED PER 2011 AASHTO GEOMETRIC DESIGN OF HIGHWAYS AND STREETS CHAPTER 9.5.3 CASE F.

U-TURN DIMENSIONS

U-TURN DIMENSIONS ARE PROVIDED TO CONFIRM ADEQUACY OF U-TURN MOVEMENT WITH CITY OF ROSEVILLE DESIGN STANDARDS SECTION 6-2 (O) AND CITY OF ROSEVILLE STANDARD DETAIL TS-15.



1: SHADED GREEN AREA REPRESENTS PORTION OF MEDIAN SITUATED BETWEEN THE FACE OF CURB AND THE REQUIRED LINE OF SIGHT.

Figure 4
Left Turn Sight Distance Analysis and U-Turn Dimensions
Upland Drive at Pleasant Grove Boulevard

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Dec 09, 2020



DASHED LINE REPRESENTS PATH OF TRAVEL OBSTRUCTED BY RAISED CURB

REFUSE VEHICLE PATH OF TRAVEL



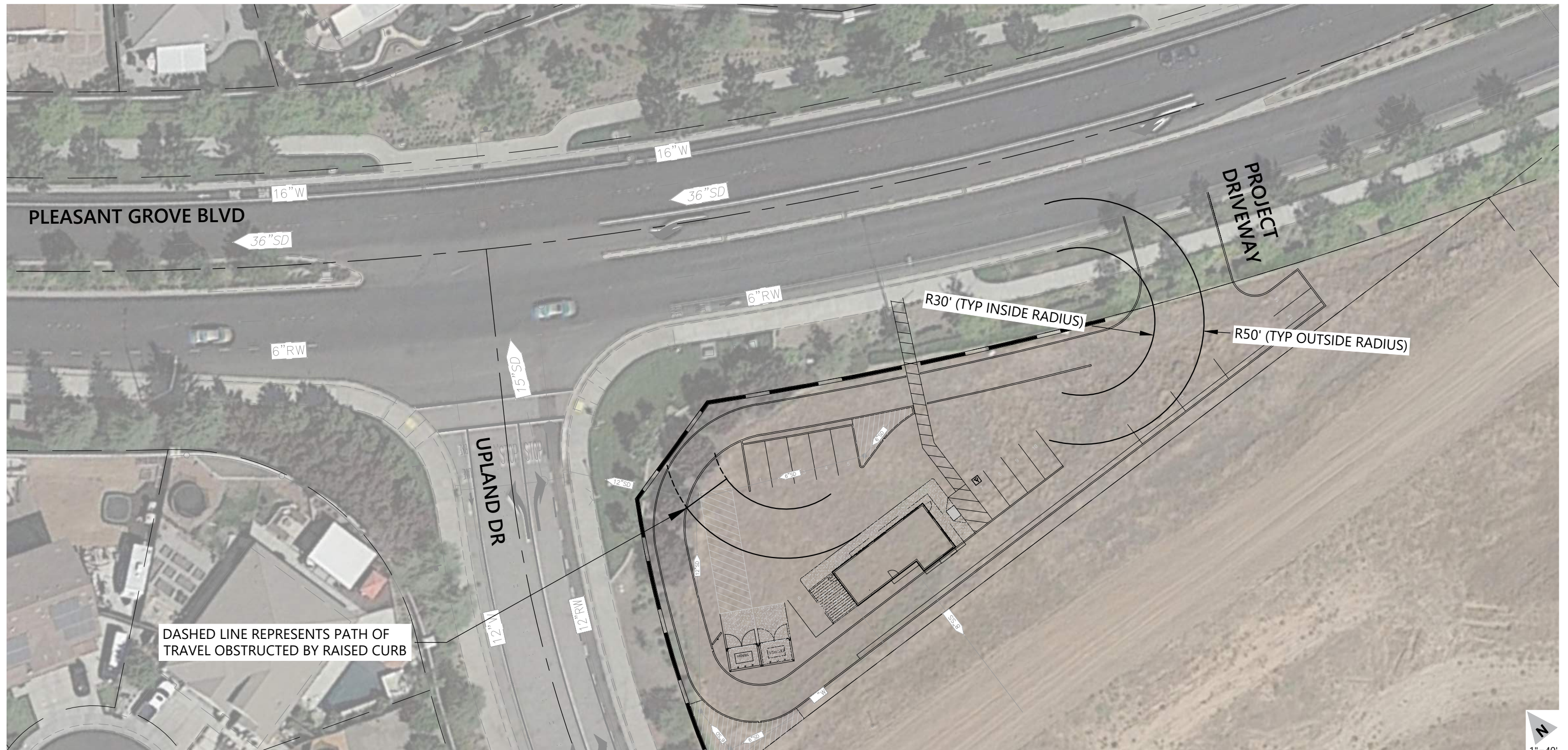
REFUSE VEHICLE PATH OF TRAVEL

REFUSE VEHICLE PATH OF TRAVEL IS PROVIDED TO CONFIRM ADEQUACY OF SOLID WASTE DESIGN WITH CITY OF ROSEVILLE DESIGN STANDARDS SECTION 15-3 (G).



Figure 5

Refuse Vehicle Path of Travel
Project Driveway at Pleasant Grove Boulevard



DASHED LINE REPRESENTS PATH OF TRAVEL OBSTRUCTED BY RAISED CURB

ORGANICS/FIRE VEHICLE PATH OF TRAVEL



ORGANICS/FIRE VEHICLE PATH OF TRAVEL

ORGANICS/FIRE VEHICLE PATH OF TRAVEL IS PROVIDED TO CONFIRM ADEQUACY WITH CITY OF ROSEVILLE DESIGN STANDARDS SECTION 15-3 (K).



Figure 6
Organics/Fire Vehicle Path of Travel
Project Driveway at Pleasant Grove Boulevard



Appendix B. Technical Appendix

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Roseville Coffee Shack
Existing Plus Project Conditions
AM Peak Hour

Intersection 3 **Pleasant Grove Boulevard/Upland Drive** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	1,175	1,059	90.2%	2.1	0.2	A
	Right Turn						
	Subtotal	1,175	1,059	90.2%	2.1	0.2	A
WB	Left Turn	60	46	76.2%	16.3	6.8	C
	Through	553	510	92.2%	0.9	0.2	A
	Right Turn						
	Subtotal	613	556	90.7%	2.2	0.7	A
Total		1,788	1,615	90.3%	2.2	0.2	A

Intersection 4 **Coffee Shack Driveway/Pleasant Grove Boulevard** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn	90	78	86.4%	13.0	4.7	B
Subtotal		90	78	86.4%	13.0	4.7	B
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	1,145	1,013	88.5%	1.7	0.2	A
	Right Turn	90	85	94.4%	0.6	0.2	A
	Subtotal	1,235	1,098	88.9%	1.6	0.2	A
WB	Left Turn						
	Through	613	560	91.4%	0.8	0.2	A
	Right Turn						
	Subtotal	613	560	91.4%	0.8	0.2	A
Total		1,938	1,736	89.6%	1.8	0.3	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Roseville Coffee Shack
Existing Plus Project Conditions
PM Peak Hour

Intersection 3 Pleasant Grove Boulevard/Upland Drive Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	789	728	92.3%	1.5	0.1	A
	Right Turn						
	Subtotal	789	728	92.3%	1.5	0.1	A
WB	Left Turn	67	56	83.8%	11.7	3.5	B
	Through	1,323	1,183	89.4%	2.0	0.2	A
	Right Turn						
	Subtotal	1,390	1,239	89.1%	2.5	0.3	A
Total		2,179	1,967	90.3%	2.1	0.2	A

Intersection 4 Coffee Shack Driveway/Pleasant Grove Boulevard Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn	81	74	91.6%	6.8	1.4	A
Subtotal		81	74	91.6%	6.8	1.4	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	775	711	91.8%	1.5	0.2	A
	Right Turn	81	78	96.9%	0.4	0.2	A
	Subtotal	856	790	92.3%	1.4	0.2	A
WB	Left Turn						
	Through	1,390	1,241	89.3%	1.7	0.2	A
	Right Turn						
	Subtotal	1,390	1,241	89.3%	1.7	0.2	A
Total		2,327	2,105	90.5%	1.7	0.2	A

Intersection 3 Pleasant Grove Boulevard/Upland Drive Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
WB	U/Left Turns	225	50	8	75	20	75	26	0%	0%

Intersection 4 Coffee Shack Driveway/Pleasant Grove Boulevard Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Through	225	25	2	25	8	25	10	0%	0%
	Through/Right	225	25	5	25	19	25	22	0%	0%
NB	Right Turn	600	50	9	75	22	100	23	0%	0%

Intersection 3 Pleasant Grove Boulevard/Upland Drive Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
WB	U/Left Turns	225	50	7	75	16	75	15	0%	0%

Intersection 4 Coffee Shack Driveway/Pleasant Grove Boulevard Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Through/Right	225	25	1	25	7	25	13	0%	0%
NB	Right Turn	600	50	6	75	13	75	17	0%	0%

Intersection 3 **Pleasant Grove Boulevard/Upland Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	53	46	86.3%	19.5	4.1	B
	Through						
	Right Turn	101	102	101.2%	13.9	3.3	B
	Subtotal	154	148	96.1%	15.7	2.2	B
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	1,347	1,267	94.0%	14.3	1.9	B
	Right Turn	76	71	92.8%	12.5	2.0	B
	Subtotal	1,423	1,337	94.0%	14.2	1.9	B
WB	Left Turn	91	59	64.9%	24.7	2.9	C
	Through	530	360	67.9%	4.2	1.1	A
	Right Turn						
	Subtotal	621	419	67.4%	7.1	0.9	A
Total		2,198	1,904	86.6%	12.7	1.4	B

Intersection 4 **Coffee Shack Driveway/Pleasant Grove Boulevard** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn	90	82	90.8%	11.4	3.0	B
	Subtotal	90	82	90.8%	11.4	3.0	B
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	1,417	1,314	92.7%	3.7	0.2	A
	Right Turn	90	90	100.0%	2.1	0.3	A
	Subtotal	1,507	1,404	93.2%	3.6	0.2	A
WB	Left Turn						
	Through	621	412	66.3%	0.9	0.2	A
	Right Turn						
	Subtotal	621	412	66.3%	0.9	0.2	A
Total		2,218	1,898	85.6%	3.3	0.1	A

Intersection 3 Pleasant Grove Boulevard/Upland Drive Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	102	103	101.3%	20.9	4.2	C
	Through						
	Right Turn	39	41	106.2%	7.1	2.6	A
	Subtotal	141	145	102.6%	17.4	3.4	B
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	810	715	88.2%	11.9	1.7	B
	Right Turn	89	75	84.5%	8.9	2.6	A
	Subtotal	899	790	87.9%	11.6	1.6	B
WB	Left Turn	162	109	67.1%	36.4	11.4	D
	Through	1,343	977	72.8%	7.3	0.8	A
	Right Turn						
	Subtotal	1,505	1,086	72.2%	10.3	1.6	B
Total		2,545	2,021	79.4%	11.3	0.9	B

Intersection 4 Coffee Shack Driveway/Pleasant Grove Boulevard Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	81	85	104.4%	6.2	1.2	A
	Subtotal	81	85	104.4%	6.2	1.2	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	831	732	88.1%	3.0	0.3	A
	Right Turn	81	64	79.6%	1.7	0.4	A
	Subtotal	912	797	87.4%	2.9	0.3	A
WB	Left Turn						
	Through	1,505	1,078	71.6%	2.7	0.3	A
	Right Turn						
	Subtotal	1,505	1,078	71.6%	2.7	0.3	A
Total		2,498	1,959	78.4%	2.9	0.2	A

Intersection 3

Pleasant Grove Boulevard/Upland Drive

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Through	725	150	30	225	61	225	68	0%	0%
	Through/Right	725	200	27	300	53	300	62	0%	0%
NB	Left Turn	500	50	9	75	16	75	17	0%	0%
	Right Turn	500	75	10	100	21	100	26	0%	0%
WB	U/Left Turns	225	75	7	100	13	100	35	0%	0%
	Through	225	50	13	100	27	100	28	0%	0%

Intersection 4

Coffee Shack Driveway/Pleasant Grove Boulevard

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Through/Right	225	25	4	25	21	25	29	0%	0%
NB	Right Turn	600	50	7	75	15	75	16	0%	0%

Intersection 3

Pleasant Grove Boulevard/Upland Drive

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Through	725	100	17	150	27	150	21	0%	0%
	Through/Right	725	150	20	225	43	225	39	0%	0%
NB	Left Turn	500	75	15	125	26	125	30	0%	0%
	Right Turn	500	50	13	50	17	50	21	0%	0%
WB	U/Left Turns	225	100	23	150	50	150	51	0%	1%
	Through	225	100	14	175	35	175	51	0%	0%

Intersection 4

Coffee Shack Driveway/Pleasant Grove Boulevard

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Through/Right	225	25	1	25	7	25	9	0%	0%
NB	Right Turn	600	50	4	75	9	75	9	0%	0%
WB	Through	425	25	3	25	13	25	18	0%	0%