



# PLANNING AND BUILDING DEPARTMENT

## PLANNING DIVISION

<https://www.edcgov.us/Government/Planning>

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### **NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION**

**NOTICE IS HEREBY GIVEN** that the County of El Dorado, as lead agency, has prepared a Mitigated Negative Declaration (MND) for the below referenced Project. The Draft MND analyzes the potential environmental effects associated with the proposed Project in accordance with the California Environmental Quality Act (CEQA). This Notice of Intent (NOI) is to provide responsible agencies and other interested parties with notice of the availability of the Draft MND and solicit comments and concerns regarding the environmental issues associated with the proposed Project.

**LEAD AGENCY:** County of El Dorado, 2850 Fairlane Court, Placerville, CA 95667

**CONTACT:** County Planner: Bianca Dinkler, 530-621-5875

**PROJECT:** DR22-0009/Granade Business Properties, LLC (8) Office/Warehouse Buildings

**PROJECT LOCATION:** The property, identified by Assessor's Parcel Number 109-240-032, consists of a 7.31-acre parcel, located on the west side of Business Drive, approximately 0.25-miles north of the intersection with Dividend Drive and Business Drive, in the Barnett Business Park, in the Shingle Springs area, Supervisorial District 4.

**PROJECT DESCRIPTION:** A Staff Level Design Review Permit, DR22-0009, for eight (8) new office/warehouse buildings. Each building would be approximately 8,959 square feet and would accommodate one (1) to two (2) tenants for a total of sixteen (16) tenants possible. Each half of each building would feature three (3) office suites with a small lobby, bathroom, and an open warehouse area. The project includes associated improvements including security fencing with vinyl slats, 12-foot wide vehicular gates to match fencing, gates between the buildings with Knox box lock and key, concrete sidewalk, a gravel building yard, truck loading area, AC paved entry and paved on-site circulation isles, a hammerhead turnaround for the fire department located between Building 1 and Building 5, masonry trash enclosures with steel gates, building and perimeter lighting, entrance signage, landscaping designed to be compliant with the Model Water Efficient Landscape Ordinance (MWELO), and 64 parking spaces (56 standard and eight (8) compliant with ADA). Access to the project site would be from Business Drive. The project would be served by connecting to existing public water and sewer services. Improvements for a water line and sewer line extension are required by El Dorado Irrigation District (EID). Electric service would be provided by connecting to existing PG&E infrastructure.

**PUBLIC REVIEW PERIOD:** The public review period for the Draft MND set forth in CEQA for this project is **30** days, beginning **September 23, 2024**, and ending **October 22, 2024**. Any written comments must be received within the public review period. Copies of the Draft MND for this project may be reviewed and/or obtained in the County of El Dorado Planning and Building Department, 2850 Fairlane Court, Placerville, CA 95667, during normal business hours or online at <https://edc-trk.aspgov.com/etrakit/>. In order to view attachments, please login or create an E-Trakit account and search the project name or application file number in the search box.

Please direct your comments to: County of El Dorado, Planning and Building Department, County Planner: Bianca Dinkler, 2850 Fairlane Court, Placerville, CA 95667 or EMAIL: [planning@edcgov.us](mailto:planning@edcgov.us)

**PUBLIC HEARING:** This Staff Level Design Review Permit is subject to a Planning Director approval and no public hearing is required.

COUNTY OF EL DORADO  
PLANNING AND BUILDING DEPARTMENT  
KAREN L. GARNER, Director  
September 20, 2024

## **DRAFT MITIGATED NEGATIVE DECLARATION**

**FILE:** DR22-0009/Granade Business Properties, LLC (8) Office/Warehouse Buildings

**PROJECT NAME** Design Review Permit Granade Business Properties, LLC (8) Office/Warehouse Buildings

**NAME OF APPLICANT:** DG Granade, Inc./Doug Granade

**ASSESSOR'S PARCEL NO.:** 109-240-032

**SECTION:** 02 **T:** 09N **R:** 08E

**LOCATION:** The project is located on the west side of Business Drive, approximately 0.25 miles north of the intersection with Dividend Drive and Business Drive, in the Barnett Business Park, in the Shingle Springs area.

☐ **GENERAL PLAN AMENDMENT:**                      **FROM:**                      **TO:**

☐ **REZONING:**                      **FROM:**                      **TO:**

☐ **TENTATIVE PARCEL MAP**

☐ **SUBDIVISION:**

**SUBDIVISION (NAME):**

☐ **SPECIAL USE PERMIT TO ALLOW:**

☒ **OTHER:** A Design Review Permit to construct and operate eight (8) new office/warehouse buildings. Each building size would be approximately 8,959 square feet and would accommodate one (1) to two (2) tenants for a total of sixteen (16) tenants possible. Each half of each building would feature three (3) office suites with a small lobby, bathroom, and an open warehouse area. The project includes associated improvements including security fencing with vinyl slats, 12-foot wide vehicular gates to match fencing, gates between the buildings with Knox box lock and key, concrete sidewalk, a gravel building yard, truck loading area, AC paved entry and paved on-site circulation isles, a hammerhead turnaround for the fire department located between Building 1 and Building 5, masonry trash enclosures with steel gates, building and perimeter lighting, entrance signage, landscaping designed to be compliant with the Model Water Efficient Landscape Ordinance (MWELO), and 64 parking spaces (56 standard and eight (8) compliant with ADA). Access to the project site would be from Business Drive. The project would be served by connecting to existing public water and sewer services. Improvements for a water line and sewer line extension are required by El Dorado Irrigation District (EID). Electric service would be provided by connecting to existing PG&E infrastructure.

### **REASONS THE PROJECT WILL NOT HAVE A SIGNIFICANT ENVIRONMENTAL IMPACT:**

☐ **NO SIGNIFICANT ENVIRONMENTAL CONCERNS WERE IDENTIFIED DURING THE REVISED INITIAL STUDY.**

☒ **MITIGATION HAS BEEN IDENTIFIED WHICH WOULD REDUCE POTENTIALLY SIGNIFICANT IMPACTS.**

☐ **OTHER:**

In accordance with the authority and criteria contained in the California Environmental Quality Act (CEQA), State Guidelines, and El Dorado County Guidelines for the Implementation of CEQA, the County Environmental Agent analyzed the project and determined that the project will not have a significant impact on the environment. Based on this finding, the Planning Department hereby prepares this MITIGATED NEGATIVE DECLARATION. A period of thirty (30) days from the date of filing this mitigated negative declaration will be provided to enable public review of the project specifications and this document prior to action on the project by COUNTY OF EL DORADO. A copy of the project specifications is on file at the County of El Dorado Planning Services, 2850 Fairlane Court, Placerville, CA 95667.

This Mitigated Negative Declaration was adopted by the Hearing Body on Date.

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Executive Secretary





**COUNTY OF EL DORADO**  
**PLANNING AND BUILDING DEPARTMENT**  
**INITIAL STUDY**  
**ENVIRONMENTAL CHECKLIST**

**Project Title:** DR22-0009/Granade Business Properties, LLC Office/Warehouse Buildings

**Lead Agency Name and Address:** El Dorado County, 2850 Fairlane Court, Placerville, CA 95667

**Contact Person:** Bianca Dinkler, Senior Planner

**Phone Number:** (530) 621-5875

**Owner's Name and Address:** Granade Business Properties, LLC 4420 Business Drive, Shingle Springs, CA 95682

**Applicant's Name and Address:** DG Granade, Inc. 4420 Business Drive, Shingle Springs, CA 95682

**Project Engineer's Name and Address:** John M. Kristedja, 6288 Butterfield Way, Placerville, CA 95667

**Project Location:** The project is located on the west side of Business Drive, approximately 0.25 miles north of the intersection with Dividend Drive and Business Drive, in the Barnett Business Park, in the Shingle Springs area.

**Assessor's Parcel Number:** 109-240-032

**Acres:** 7.31-acres

**Sections:** S: 02 T: 09N R: 08E

**General Plan Designation:** Industrial (I)

**Zoning:** Industrial Light within Design Review Community Combining Zone (IL-DC)

**Description of Project:** A Design Review Permit to construct and operate eight (8) new office/warehouse buildings. Each building size would be approximately 8,959 square feet and would accommodate one (1) to two (2) tenants for a total of sixteen (16) tenants possible. Each half of each building would feature three (3) office suites with a small lobby, bathroom, and an open warehouse area. The project includes associated improvements including security fencing with vinyl slats, 12-foot wide vehicular gates to match fencing, gates between the buildings with Knox box lock and key, concrete sidewalk, a gravel building yard, truck loading area, AC paved entry and paved on-site circulation isles, a hammerhead turnaround for the fire department located between Building 1 and Building 5, masonry trash enclosures with steel gates, building and perimeter lighting, entrance signage, landscaping designed to be compliant with the Model Water Efficient Landscape Ordinance (MWELO), and 64 parking spaces (56 standard and eight (8) compliant with the American with Disabilities Act (ADA)). Access to the project site would be from Business Drive. The project would be served by connecting to existing public water and sewer services. Improvements for a water line and sewer line extension are required by El Dorado Irrigation District (EID). Electric service would be provided by connecting to existing PG&E infrastructure in the immediate project vicinity. (Attachments 7 and 8).

**Environmental Setting:** The project site is an undeveloped 7.31-acre parcel located at an elevation of 1,339-feet above mean sea level. The majority of the on-site soil types are ReB (Rescue sandy loam, 2 to 9 percent slopes), with Rk (Rescue clay, clayey variant, 0 to 2 percent slopes) in the northwestern portion of the site. The site is mostly flat and the southern portion of the site previously disturbed by grading and spoil stockpiling, and the northeast and eastern portion of the site is undisturbed. Vegetation includes California annual grassland (5.91 acres), mixed oak woodland (0.80 acre), and ruderal/disturbed (0.35 acre). The southernmost portion is largely barren aside from ruderal plants. Mixed oak woodland occurs in the northwest corner of the property. Old Mill Creek runs north of the property and crosses Shingle Lime Mine Road but does not cross over the property. Proposed grading would occur at the project entrance for a new driveway, for the eight (8) new office/warehouse building pads, on-site circulation isles, and stormwater improvements. Stormwater would be handled by two vegetative swales to collect and treat stormwater runoff from paved surfaces. The swales would direct the runoff to a proposed detention basin that would be located at the southwestern corner of the parcel. As shown on Parcel Map 52/66/1, there is a 60-foot-wide non-exclusive road and public utility easement with 30-foot private road easement along the western property line at Shingle Lime Mine Road, a 60-foot non-exclusive road and public utility easement right of way (ROW) along the eastern property line at Business Drive, and a 60-foot wide non-exclusive road and public utilities easement along the northern property line. Access to the project site would be through a new driveway from Business Drive at the southeastern corner of the site. The project site is surrounded by existing commercial development to the north, east, and south, and residential development to the west. A Botanical Survey was prepared for the project by Sycamore Environmental Consultants, Inc., dated November 1, 2019; a Botanical Resources Technical Memorandum was prepared by SWCA Environmental Consultants, Inc., dated January 11, 2023; and a Biological Resources Technical Memorandum was prepared by SWCA Environmental Consultants

dated June 13, 2023. A Drainage Study with Soil Report was prepared by Warren Consulting Engineers, Inc., dated April 8, 2022. Further discussion and analysis of these topics are contained within this Initial Study. (Attachments 13, 14, 15, and 16).

**Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):**

1. El Dorado County Building Services
2. El Dorado County Department of Transportation
3. El Dorado County Stormwater Coordinator, West Slope
4. El Dorado County Air Quality Management District
5. El Dorado County Environmental Management Department
6. El Dorado County Surveyor's Office
7. El Dorado County Fire Protection District
8. El Dorado Irrigation District
9. PG&E

**Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?** At the time of the application, seven Tribes have requested to be notified of proposed projects in El Dorado County: Ione Band of Miwok Indians, Nashville-El Dorado Miwok, Shingle Springs Band of Miwok Indians, Tsi Akim Maidu, United Auburn Indian Community (UAIC), Washoe Tribe of Nevada and California, and Wilton Rancheria. These Tribes were notified of the proposed project by certified mail on November 28, 2022. Further discussion is included in the Cultural Resources and the Tribal Cultural Resources sections of this Initial Study.

### ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

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

### DETERMINATION

On the basis of this initial evaluation:

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

Signature: Bianca Dinkler Date: 8/23/24

Printed Name: Bianca Dinkler, Senior Planner For: El Dorado County

Signature: Ande Flower Date: 8/23/24

Printed Name: Ande Flower, Planning Manager For: El Dorado County

## **PROJECT DESCRIPTION**

### **Introduction**

This Initial Study has been prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts resulting from the proposed project.

Throughout this Initial Study, please reference the following Attachments:

Attachment 1: Location Map  
Attachment 2: Aerial Map  
Attachment 3: Assessor's Parcel Page  
Attachment 4: General Plan Land Use Map  
Attachment 5: Zoning Map  
Attachment 6: Parcel Map 52/66/1  
Attachment 7: Site Plans  
Attachment 8: Landscape Plans  
Attachment 9: Arborist Report  
Attachment 10: Facilities Improvement Letter  
Attachment 11: Transportation Impact Assessment  
Attachment 12: DKS Memo for Transportation Impact Assessment  
Attachment 13: Drainage Study with Soil Report  
Attachment 14: Botanical Survey  
Attachment 15: Botanical Resources Technical Memorandum  
Attachment 16: Biological Resources Technical Memorandum  
Attachment 17: Wildland Urban Interface Fire Protection Plan

**Project Description:** The project consists of a Design Review Permit to construct and operate eight (8) new office/warehouse buildings. Each building size would be approximately 8,959 square feet and would accommodate one (1) to two (2) tenants for a total of sixteen (16) tenants possible. Each half of each building would feature three (3) office suites with a small lobby, bathroom, and an open warehouse area. The project includes associated improvements including security fencing with vinyl slats, 12-foot wide vehicular gates to match fencing, gates between the buildings with Knox box lock and key, concrete sidewalk, a gravel building yard, truck loading area, AC paved entry and paved on-site circulation isles, a hammerhead turnaround for the fire department located between Building 1 and Building 5, masonry trash enclosures with steel gates, building and perimeter lighting, entrance signage, landscaping designed to be compliant with the Model Water Efficient Landscape Ordinance (MWELO), and 64 parking spaces (56 standard and eight (8) compliant with the American with Disabilities Act (ADA)). Access to the project site would be from Business Drive. The project would be served by connecting to existing public water and sewer services. Improvements for a water line and sewer line extension are required by El Dorado Irrigation District (EID). Electric service would be provided by connecting to existing PG&E infrastructure in the immediate project vicinity. (Attachments 7 and 8).

**Site Description:** The project site is an undeveloped 7.31-acre parcel located at an elevation of 1,339-feet above mean sea level. The majority of the on-site soil types are ReB (Rescue sandy loam, 2 to 9 percent slopes), with Rk (Rescue clay, clayey variant, 0 to 2 percent slopes) in the northwestern portion of the site. The site is mostly flat and the southern portion of the site previously disturbed by grading and spoil stockpiling, and the northeast and eastern portion of the site is undisturbed. Vegetation includes California annual grassland (5.91 acres), mixed oak woodland (0.80 acre), and ruderal/disturbed (0.35 acre). The southernmost portion is largely barren aside from ruderal plants. Mixed oak woodland occurs in the northwest corner of the property. Old Mill Creek runs north of the property and crosses Shingle Lime Mine Road but does not cross over the property. Proposed grading would occur at the project entrance for a new driveway, for the eight (8) new office/warehouse building pads, on-site circulation isles, and stormwater improvements. Stormwater would be handled by two vegetative swales to collect and treat stormwater runoff from paved surfaces. The swales would direct the runoff to a proposed detention basin that would be located at the southwestern corner of the parcel. As shown on Parcel Map 52/66/1, there is a 60-foot wide non-exclusive road and public utility easement with 30-foot private road easement along the western property line at Shingle Lime Mine Road, a 60-foot non-exclusive road and public utility easement right of way (ROW) along the eastern property

line at Business Drive, and a 60-foot wide non-exclusive road and public utilities easement along the northern property line. Access to the project site would be through a new driveway from Business Drive at the southeastern corner of the site. The project site is surrounded by existing commercial development to the north, east, and south, and residential development to the west. A Botanical Survey was prepared for the project by Sycamore Environmental Consultants, Inc., dated November 1, 2019; a Botanical Resources Technical Memorandum was prepared by SWCA Environmental Consultants, Inc., dated January 11, 2023; and a Biological Resources Technical Memorandum was prepared by SWCA Environmental Consultants dated June 13, 2023. A Drainage Study with Soil Report was prepared by Warren Consulting Engineers, Inc., dated April 8, 2022. Further discussion and analysis of these topics are contained within this Initial Study. (Attachments 13, 14, 15, and 16).

#### Project Location and Surrounding Uses:

The 7.31-acre undeveloped site is located on the west side of Business Drive, 0.25 miles north of the intersection with Dividend Drive and Business Drive, in the Barnett Business Park in Shingle Springs. The adjacent parcels are zoned Industrial Light within a Design Review Community combining zone (IL-DC) to the north, east, and south, and Residential Estate, Five-acre (RE-5) to the west; and a General Plan land use designation of Industrial to the north, east, and south, and Low Density Residential (LDR) to the west. The surrounding uses are light industrial uses to the north, east, and south (Barnett Business Park), and a large lot residential subdivision to the west.

#### Project Characteristics:

##### 1. Transportation/Circulation/Stormwater/Parking/Fire Protection

The El Dorado County Department of Transportation (DOT) reviewed the project and provided comments which would be incorporated into the project as project-specific and standard conditions of approval. Access would be from Business Drive. No access to Shingle Lime Mine Road is proposed. On-site road improvements are required to include construction of an extension of Business Drive from its exiting northerly terminus to just beyond the proposed driveway's northern curb return. Further, based on review of the Transportation Impact Study Initial Determination Form (TIS ID), it was determined that a traffic study was required. A Transportation Impact Assessment (TIA) was prepared by FSI Traffic Engineering with final report dated September 8, 2023. DOT reviewed the TIA, and the TIA was peer reviewed by DKS Associates, with final memorandum dated September 26, 2023. The document was reviewed for content and compliance and sufficiently addressed all comments, and a determination was made that the addition of project traffic would result in acceptable Levels of Service per General Plan Policy TC-Xd. (Attachments 11 and 12).

Stormwater would be handled by two vegetative swales to collect and treat stormwater runoff from paved surfaces. The swales would direct the runoff to a proposed detention basin that would be located at the southwestern corner of the parcel. The detention basin would release controlled flow toward the existing drainage path along Shingle Lime Mine Road.

As shown on the site plans, each office/warehouse building would provide seven (7) standard parking spaces, four (4) employee parking spaces, and one (1) accessible parking space for a total of 56 standard parking spaces, 32 employee parking spaces, and eight (8) accessible parking spaces.

The El Dorado County Fire Protection District (EDCFPD) reviewed the project and provided comments which would be incorporated into the project as conditions of approval, specifically pertaining to fire flow, sprinklers, hydrants, fire department access, roadway surface, roadway grade, traffic calming measures, turning radius, gates, funding mechanism for emergency fire access components, wildland fire safe plan, fencing, parking and fire lanes, vegetative fire clearance, trail systems and land-locked access, addressing, landscaping, improvement plans, and building and fire plans. Further, a Wildland Urban Interface Fire Protection Plan is included with the project. (Attachment 17).

## 2. Utilities and Infrastructure

The project water source for both potable water and emergency fire protection would be by connecting to existing public water service provided by El Dorado Irrigation District (EID). Based on the Facilities Improvement Letter (FIL) dated March 4, 2022, a 10-inch water line is currently under construction in Business Drive. The El Dorado County Fire Protection District determined that the minimum fire flow for the proposed project would be 1,500 gallons per minute (GPM) for a 2-hour duration while maintaining a 20-psi residual pressure. This system would be able to deliver the required fire flow. To receive service, construction of a water line extension to connect to the 10-inch water line would be required and would be located near the southern boundary of the project site. (Attachment 10).

The project sewer source would be by connecting to existing public sewer service provided by EID. Based on the FIL, there is a 4-inch sewer force main currently under construction in Business Drive that would be located near the southern boundary of the project site. This sewer line and the downstream sewer system has adequate capacity at this time. In order to receive service from this line, an extension of facilities of adequate size must be constructed. A new private full sewage lift station would be required to serve the proposed project. As of date, the project would require 1 EDU of sewer service. (Attachment 10).

Electric service would be provided by connecting to existing PG&E infrastructure in the immediate project vicinity.

## 3. Construction Considerations

The proposed project would maintain the current zoning designation of Industrial Light within a Design Review Community combining zone (IL-DC), which allows for light industrial uses. Future construction activities would be completed in conformance with applicable agency requirements, and subject to grading and building permits from the El Dorado County Building Services.

## 4. El Dorado County and Ecological Preserve Fees

El Dorado County has a Rare Plant Mitigation Fee program (Zoning Ordinance Section 130.71.040 - Ecological Preserve Mitigation and Fee in Lieu of Mitigation), to offset the impacts of development in western El Dorado County on lands potentially suitable for rare plants. Development projects within Rare Plant Mitigation Areas are required to pay an Ecological Preserve Fee. The project site is in Rare Plant Mitigation Area 1. Lands in Mitigation Area 1 are within the rare soils study area and offsite mitigation through payment of the Ecological Preserve Fee is required. The Ecological Preserve Fee varies depending on the type of proposed use/structure and would be determined and assessed at the time of processing of a building permit.

## Project Schedule and Approvals

This Initial Study is being circulated for public and agency review for a 30-day period. Written comments on the Initial Study should be submitted to the project planner indicated in the Summary section, above. Following the close of the written comment period, the Initial Study will be considered by the Lead Agency in a public meeting and the Negative Declaration (MND) will be adopted if it is determined to be in compliance with California Environmental Quality Act (CEQA). The Lead Agency will also determine whether to approve the project.

## **EVALUATION OF ENVIRONMENTAL IMPACTS**

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. If the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is a fair argument that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Mitigated Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of Mitigation Measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the Mitigation Measures, and briefly explain how they reduce the effect to a less than significant level.
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063(c)(3)(D)). In this case, a brief discussion should identify the following:
  - a. Earlier Analysis Used. Identify and state where they are available for review.
  - b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
  - c. Mitigation Measures. For effects that are "Less Than Significant With Mitigation Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
  - a. the significance criteria or threshold, if any, used to evaluate each question; and
  - b. the mitigation measure identified, if any, to reduce the impact to less than significant.



## **ENVIRONMENTAL IMPACTS**

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

### **Regulatory Setting:**

#### ***Federal Laws, Regulations, and Policies***

No federal regulations are applicable to aesthetics in relation to the proposed project.

#### ***State Laws, Regulations, and Policies***

In 1963, the California State Legislature established the California Scenic Highway Program, a provision of the Streets and Highways Code, to preserve and enhance the natural beauty of California (Caltrans, 2022). The state highway system includes designated scenic highways and those that are eligible for designation as scenic highways.

#### ***Local Laws, Regulations, and Policies***

The County has several standards and ordinances that address issues relating to visual resources. Many of these can be found in the County Zoning Ordinance (Title 130 of the County Code). The Zoning Ordinance consists of descriptions of the zoning districts, including identification of uses allowed by right or requiring a special-use permit and specific development standards that apply in particular districts based on parcel size and land use density. These development standards often involve limits on the allowable size of structures, required setbacks, and design guidelines. Included are requirements for setbacks and allowable exceptions, the location of public utility distribution and transmission lines, architectural supervision of structures facing a state highway, height limitations on structures and fences, outdoor lighting, and wireless communication facilities.

### **Environmental Setting:**

Visual resources are classified as 1) scenic resources or 2) scenic views. Scenic resources include specific features of a viewing area (or viewshed) such as trees, rock outcroppings, and historic buildings. They are specific features that act as the focal point of a viewshed and are usually foreground elements. Scenic views are elements of the

broader viewshed such as mountain ranges, valleys, and ridgelines. They are usually middle ground or background elements of a viewshed that can be seen from a range of viewpoints, often along a roadway or other corridor.

A list of the county's scenic views and resources is presented in Table 5.3-1 of the *El Dorado County General Plan Draft EIR* (El Dorado County 2003:5.3-3). This list includes areas along highways where viewers can see large water bodies (e.g., Lake Tahoe and Folsom Reservoir), river canyons, rolling hills, forests, or historic structures or districts that are reminiscent of El Dorado County's heritage.

Several highways in El Dorado County have been designated by the California Department of Transportation (Caltrans) as scenic highways or are eligible for such designation. These include U.S. 50 from the eastern limits of the Government Center interchange (Placerville Drive/Forni Road) in Placerville to South Lake Tahoe, all of SR 89 within the county, and those portions of SR 88 along the southern border of the county. There are no officially designated state scenic corridors in the vicinity of the project site (Caltrans 2018).

Rivers in El Dorado County include the American, Cosumnes, Rubicon, and Upper Truckee rivers. A large portion of El Dorado County is under the jurisdiction of the United States Forest Service (USFS), which oversees rivers or river sections identified as Wild and Scenic under the Wild and Scenic Rivers Act. To date, no river sections in El Dorado County have been nominated for or granted Wild and Scenic River status.

**Discussion:** A substantial adverse effect to visual resources would occur if the project would result in the introduction of physical features that are not characteristic of the surrounding development, substantially change the natural landscape, or obstruct an identified public scenic vista.

- a. **Scenic Vista or Resource:** No scenic vistas, as designated by the County General Plan, are in the vicinity of the site (El Dorado County 2003, 5.3-3 through 5.3-5). The project site is not adjacent to or visible from the portion of U.S. 50 that is designated a State Scenic Highway. Any new structures would require permits for construction and would be required to comply with the General Plan and the Zoning Ordinance. There would be no impact.
- b. **Scenic Resources:** The project site is not visible from an officially designated State Scenic Highway or county-designated scenic highway, or any roadway that is part of a corridor protection program (Caltrans, 2018). There are no views of the site from public parks or scenic vistas. Though there are trees in the project vicinity, there are no trees or historic buildings that have been identified by the County as contributing to exceptional aesthetic value at the project site. There would be no impact.
- c. **Visual Character:** The project site is located within a commercial/industrial business park, Barnett Ranch Business Park, and surrounded by similar commercial/industrial businesses to the north, east, and south. A large lot, residential subdivision is located to the west of the project site and is separated by Shingle Lime Mine Road. The project site is zoned Industrial Light within a Design Review Community combining zone (IL-DC) and as stated in Zoning Ordinance Section 130.23.010, the IL zone is applied to lands for manufacturing and associated retail or service activities, wholesaling, and other industrial uses, where the primary activity is conducted within a building or buildings, or in outdoor storage or activity areas. The proposed office/warehouse buildings are a permitted use in the IL zone and would be compatible with the surrounding business development in the Barnett Ranch Business Park. Further, the project has been designed in a manner to fit in with the surrounding commercial and light industrial uses including neutral building colors, downward-shielded building and perimeter lighting, and landscaping in accordance with County standards. The impacts would be less than significant.
- d. **Light and Glare:** The proposed project could produce new light and glare but has been designed to minimize any impact to a level of less than significant. Consistent with County requirements, all lighting would be shielded downward on the buildings and in the parking lot. This design would maintain minimal light impacts to adjacent uses, while also providing enough lighting for safety and security. The project is designed to comply with County lighting ordinance requirements and would be reviewed for compliance at time of the building permit submittal. The impacts would be less than significant.

**FINDING:** With adherence to El Dorado County Code of Ordinances, for this Aesthetics category, impacts would be anticipated to be less than significant.

<b>II. AGRICULTURE AND FOREST RESOURCES.</b> In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by California Department of forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or Locally Important Farmland (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				<b>X</b>
b. Conflict with existing zoning for agricultural use, or a Williamson Act Contract?				<b>X</b>
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))?				<b>X</b>
d. Result in the loss of forest land or conversion of forest land to non-forest use?				<b>X</b>
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?				<b>X</b>

**Regulatory Setting:**

***Federal Laws, Regulations, and Policies***

No federal regulations are applicable to agricultural and forestry resources in relation to the proposed project.

***State Laws, Regulations, and Policies***

**Farmland Mapping and Monitoring Program**

The Farmland Mapping and Monitoring Program (FMMP), administered by the California Department of Conservation (CDC), produces maps and statistical data for use in analyzing impacts on California's agricultural resources (CDC 2008). FMMP rates and classifies agricultural land according to soil quality, irrigation status, and other criteria. Important Farmland categories are as follows (CDC 2013a):

***Prime Farmland:*** Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. These lands have the soil quality, growing season, and moisture supply needed to

produce sustained high yields. Prime Farmland must have been used for irrigated agricultural production at some time during the 4 years before the FMMP's mapping date.

***Farmland of Statewide Importance:*** Farmland similar to Prime Farmland, but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Farmland of Statewide Importance must have been used for irrigated agricultural production at some time during the 4 years before the FMMP's mapping date.

***Unique Farmland:*** Farmland of lesser quality soils used for the production of the state's leading agricultural crops. These lands are usually irrigated but might include non-irrigated orchards or vineyards, as found in some climatic zones. Unique Farmland must have been cropped at some time during the 4 years before the FMMP's mapping date.

***Farmland of Local Importance:*** Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

#### California Land Conservation Act of 1965 (Williamson Act)

The California Land Conservation Act of 1965 (commonly referred to as the Williamson Act) allows local governments to enter into contracts with private landowners for the purpose of preventing conversion of agricultural land to non-agricultural uses (CDC 2013b). In exchange for restricting their property to agricultural or related open space use, landowners who enroll in Williamson Act contracts receive property tax assessments that are substantially lower than the market rate.

#### Z'berg-Nejedly Forest Practice Act

Logging on private and corporate land in California is regulated by the 1973 Z'berg-Nejedly Forest Practice Act. This Act established the Forest Practice Rules (FPRs) and a politically appointed Board of Forestry to oversee their implementation. The California Department of Forestry (CALFIRE) works under the direction of the Board of Forestry and is the lead government agency responsible for approving logging plans and for enforcing the FPRs.

**Discussion:** A substantial adverse effect to Agricultural Resources would occur if:

- There is a conversion of choice agricultural land to nonagricultural use, or impairment of the agricultural productivity of agricultural land;
  - The amount of agricultural land in the County is substantially reduced; or
  - Agricultural uses are subjected to impacts from adjacent incompatible land uses.
- a. **Farmland Mapping and Monitoring Program:** The project site is not mapped as Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or Locally Important Farmland. The proposed office/warehouse project would not convert such lands to non-agriculture uses. There would be no impact.
- b. **Agricultural Uses:** The project site is not located within a Williamson Act Contract, nor adjacent to land under a Williamson Act Contract. There would be no impact.
- c.-d. **Loss of Forest Land or Conversion of Forest Land:** The project site is not designated as Timberland Preserve Zone (TPZ) or other forest land according to the General Plan and Zoning Ordinance. There would be no impact.
- e. **Conversion of Prime Farmland or Forest Land:** The proposed project would not convert prime farmland or forest land to non-agriculture uses. There would be no impact.

**FINDING:** For this Agriculture and Forest Resources category, there would be no impacts.

<b>III. AIR QUALITY. <i>Would the project:</i></b>				
	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 pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
c. Expose sensitive receptors to substantial pollutant concentrations?			X	
d. Create objectionable odors affecting a substantial number of people?			X	

### **Regulatory Setting:**

#### ***Federal Laws, Regulations, and Policies***

The Clean Air Act is implemented by the U.S. Environmental Protection Agency (USEPA) and sets ambient air limits, the National Ambient Air Quality Standards (NAAQS), for six criteria pollutants: particulate matter of aerodynamic radius of 10 micrometers or less (PM<sub>10</sub>), particulate matter of aerodynamic radius of 2.5 micrometers or less (PM<sub>2.5</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ground-level ozone, and lead. Of these criteria pollutants, particulate matter and ground-level ozone pose the greatest threats to human health.

#### ***State Laws, Regulations, and Policies***

The California Air Resources Board (CARB) sets standards for criteria pollutants in California that are more stringent than the U.S. National Ambient Air Quality Standards (NAAQS) and include the following additional contaminants: visibility-reducing particles, hydrogen sulfide, sulfates, and vinyl chloride. The proposed project is located within the Mountain Counties Air Basin, which is comprised of seven air districts: the Northern Sierra Air Quality Management District (AQMD), Placer County Air Pollution Control District (APCD), Amador County APCD, Calaveras County APCD, the Tuolumne County APCD, the Mariposa County APCD, and a portion of the El Dorado County AQMD, which consists of the western portion of El Dorado County. The El Dorado County Air Quality Management District (AQMD) manages air quality for attainment and permitting purposes within the west slope portion of El Dorado County.

USEPA and CARB regulate various stationary sources, area sources, and mobile sources. USEPA has regulations involving performance standards for specific sources that may release toxic air contaminants (TACs), known as hazardous air pollutants (HAPs) at the federal level. In addition, USEPA has regulations involving emission criteria for off-road sources such as emergency generators, construction equipment, and vehicles. CARB is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. CARB also establishes passenger vehicle fuel specifications.

Air quality in the project area is regulated by the El Dorado County Air Quality Management District. California Air Resources Board and local air districts are responsible for overseeing stationary source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality-related sections of environmental documents required to comply with CEQA. The AQMD regulates air quality through the federal and state Clean Air Acts, district rules, and its permit authority. National and

State Ambient Air Quality Standards (AAQS) have been adopted by the Environmental Protection Agency and State of California, respectively, for each criteria pollutant: ozone, particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide.

The Environmental Protection Agency and State also designate regions as “attainment” (within standards) or “nonattainment” (exceeds standards) based on the ambient air quality. The County is in nonattainment status for both federal and state ozone standards, the state PM<sub>10</sub> standards, federal PM<sub>2.5</sub> standards, and is in attainment or unclassified status for other pollutants (California Air Resources Board 2013). The El Dorado County Air Quality Management District (EDCAQMD) has developed a Guide to Air Quality Assessment (2002) to evaluate project specific impacts and help determine if air quality mitigation measures are needed, or if potentially significant impacts could result. The County uses the EDCAQMD thresholds, as set forth in their guide. Specifically, the EDCAQMD has established significance thresholds for emissions of the ozone precursors reactive organic gases (ROG) and nitrogen oxides (NO<sub>x</sub>), which are included in the chart below:

Criteria Pollutant	El Dorado County Threshold
Reactive Organic Gasses (ROG)	82 lbs/day
Nitrogen Oxides (NO <sub>x</sub> )	82 lbs/day

If a project would result in mass emissions in excess of the thresholds of significance, the project could affect the EDCAQMD’s commitment to attainment of the federal AAQS for ozone and, thus, could result in a significant adverse impact on air quality in the region. Thresholds for PM<sub>10</sub> or other pollutants, including CO, PM, SO<sub>2</sub>, NO<sub>2</sub>, sulfates, lead, and H<sub>2</sub>S, have not yet been established by EDCAQMD. However, a project could be considered to have a significant impact on air quality if it would contribute significantly to a violation of the applicable AAQS.

The guide includes a table (Table 5.2) listing project types with potentially significant operational emissions. The EDCAQMD guide states that projects of the type and size that fall below the screening criteria set forth in this table are also considered to result in less-than-significant operational emissions of the other pollutants.

Additionally, the EDCAQMD guide identifies two screening approaches for construction emissions. Section 4.2.2 of the EDCAQMD guide includes screening criteria for construction based on incorporation of mitigation measures. ROG and NO<sub>x</sub> construction emissions may be assumed to not be significant if:

- The project encompasses 12 acres or less of ground that is being worked at one time during construction; and
- At least one of the recommended mitigation measures set forth in Section 4.4.1 of the EDCAQMD guide is incorporated into the construction of the project; or
- The project proponent commits to pay mitigation fees in accordance with the provisions of an established mitigation fee program in the district (or such program in another air pollution control district that is acceptable to District).

Alternatively, Table 4.1 of the EDCAQM guide sets forth the following screening criteria for construction emissions based on fuel use:

- Daily average fuel use is less than 337 gallons per day for equipment from 1995 or earlier, or 402 gallons per day for equipment from 1996 or later.

If the project meets one of the criteria above, the EDCAQMD also assumes that exhaust emissions of other air pollutants from the operation of equipment and vehicles are not significant.

For construction-related Fugitive dust (PM<sub>10</sub>), if dust suppression measures will prevent visible emissions beyond the boundaries of the project, further calculations to determine PM emissions are not necessary. For the other criteria pollutants, including CO, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>2</sub>, sulfates, lead, and H<sub>2</sub>S, a project is considered to have a significant impact on air quality if it will cause or contribute significantly to a violation of the applicable national or state ambient air quality standard(s).

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are also a category of environmental concern. Common stationary sources of TACs include gasoline stations, dry cleaners, and diesel backup generators, which are subject to EDCAQMD stationary source permit requirements. The other, often more significant, common source type is on-road motor vehicles, such as cars and trucks, on freeways and roads, and off-road sources such as construction equipment, ships, and trains. This is due to fossil fueled combustion engines, including those used in cars, trucks, and some pieces of construction equipment, which release at least 40 different TACs. TACs are regulated or evaluated on the basis of risk to human health rather than comparison to an AAQS or emission-based threshold. The EDCAQMD considers an increase in cancer risk levels of more than 10 in one million persons or a non-cancer hazard index greater than 1.0 to be a significant impact related to TACs, as presented in the chart below. The cancer risk level and non-cancer hazard index are typically applied to individual stationary sources of TACs; however, the EDCAQMD does note that the cancer risk and hazard index thresholds may also be applied to activities that are non-stationary, such as diesel delivery trucks and off-road construction equipment.

Risk Factor	El Dorado County Threshold
Cancer	Increased cancer risk of >10.0 cases per million persons
Non-Cancer	Increased non-cancer risk of >1.0 Hazard Index (Chronic or Acute)

Naturally occurring asbestos (NOA) is also a concern in El Dorado County because it is known to be present in certain soils and can pose a health risk if released into the air. The AQMD has adopted an El Dorado County Naturally Occurring Asbestos Review Area Map that identifies those areas more likely to contain NOA (El Dorado County 2005).

**Discussion:** The EDCAQMD has developed a Guide to Air Quality Assessment (2002) to evaluate project specific impacts and help determine if air quality mitigation measures are needed, or if potentially significant impacts could result. A substantial adverse effect on air quality would occur if:

- Emissions of ROG and NO<sub>x</sub> will result in construction or operation emissions greater than 82lbs/day (Table 3.2);
  - Emissions of PM<sub>10</sub>, CO, SO<sub>2</sub> and NO<sub>x</sub>, as a result of construction or operation emissions, will result in ambient pollutant concentrations in excess of the applicable National or State Ambient Air Quality Standard (AAQS). Special standards for ozone, CO, and visibility apply in the Lake Tahoe Air Basin portion of the County; or
  - Emissions of toxic air contaminants cause cancer risk greater than 1 in 1 million (10 in 1 million if best available control technology for toxics is used) or a non-cancer Hazard Index greater than 1. In addition, the project must demonstrate compliance with all applicable District, State and U.S. EPA regulations governing toxic and hazardous emissions.
- a. **Air Quality Plan:** The EDCAQMD has adopted Rules and Regulations establishing rules and standards for the reduction of stationary source air pollutants (ROG/VOC, NO<sub>x</sub>, and O<sub>3</sub>). Also, the Sacramento Regional 8-Hour Ozone Attainment and Further Reasonable Progress Plan (2018) has set a schedule for implementing and funding transportation contract measures to limit mobile source emissions. As presented in the discussion below, the projects emissions would be below the applicable thresholds of significance which are intended to help the region meet and attain the AAQS; thus, the project would be consistent with the regional attainment plan. EDCAQMD reviewed the project and provided conditions of approval that would be incorporated into the project. As conditioned, the impacts would be less than significant.
- b. **Air Quality Standards and Cumulative Impacts:** Construction of the proposed project would contribute air pollutants due to construction and additional vehicle trips to and from the site; however, these contributions would not result in exceedance of any air quality standards or a cumulatively considerable net increase of any criteria pollutant. The project would include measures set forth in Section 4.4.1 of the EDCAQM guide described above, and project site is less than 12 acres in size, thus, project construction would meet the screening criteria for construction emissions. Further, EDCAQMD reviewed the project and provided conditions of approval that would be incorporated into the project. Existing regulations implemented at issuance of grading and building permits would ensure that any construction related PM<sub>10</sub>



dust emissions would be reduced to acceptable levels. For example, any activities associated with grading and construction would require a Fugitive Dust Mitigation Plan (FDMP). The FDMP would address grading measures and operation of equipment to minimize and reduce the level of defined particulate matter exposure and/or emissions to a warehousing land use 825,000 sf or less would be expected to generate emissions of ROG and NOx below the applicable thresholds of significance. The proposed project would involve new office/warehouse buildings totaling approximately 71,672 sf, which would be below the screening level for a general office or warehousing land use. Thus, pursuant to the EDCAQM guide, the proposed project would result in operational emissions less than the applicable thresholds of significance, and impacts related to operational emissions would be less than significant.

- c. **Sensitive Receptors:** The California Health and Safety Code §42705.5 (a)(5) identify sensitive receptors as children, the elderly, people with illnesses, or others that are especially sensitive to the effects of air pollutants. Hospitals, schools, and day care centers are examples of sensitive receptor locations. The project site is not adjacent to a sensitive receptor location; however, the project site is located adjacent to single-unit residences to the west, across from Shingle Lime Mine Road. Emissions from construction activities are considered temporary and would not be expected to result in substantial pollutant concentrations. The proposed project may involve activities that could result in TAC emissions such as heavy-duty truck deliveries to the site. However, the proposed buildings would be set back from Shingle Lime Mine Road and, thus, any potential loading areas associated with the buildings, where truck activity would occur on the site, would be sufficiently set back from the nearest residence, which is located nearly 100 feet from project site boundaries, across Shingle Lime Mine Road. In addition, any trucks accessing the site would do so from Business Drive and would not travel along Shingle Lime Mine Road adjacent to the nearest residence. Further, future businesses that would locate in the proposed offices/warehouses would be reviewed during building permit review to verify the uses are allowed by right in the IL zone and would be reviewed for compliance with requirements, as applicable. The impacts would be less than significant.
- d. **Objectionable Odors:** Table 3-1 of the Guide to Air Quality Assessment (AQMD, 2002) does not list the proposed project for office/warehouse buildings as a use known to create objectionable odors. The impacts would be less than significant.

**FINDING:** The proposed project would not affect the implementation of regional air quality regulations or management plans. With conditions of approval, the proposed project would not be anticipated to cause substantial adverse effects to air quality, nor exceed established significance thresholds for air quality impacts.

IV. BIOLOGICAL RESOURCES. <i>Would the project:</i>				
	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 Wildlife 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, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?			X	

<b>IV. BIOLOGICAL RESOURCES.</b> <i>Would the project:</i>				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
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?			<b>X</b>	
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?			<b>X</b>	
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		<b>X</b>		
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?				<b>X</b>

**Regulatory Setting:**

***Federal Laws, Regulations, and Policies***

**Endangered Species Act**

The Endangered Species Act (ESA) (16 U.S. Code [USC] Section 1531 *et seq.*; 50 Code of Federal Regulations [CFR] Parts 17 and 222) provides for conservation of species that are endangered or threatened throughout all or a substantial portion of their range, as well as protection of the habitats on which they depend. The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) share responsibility for implementing the ESA. In general, USFWS manages terrestrial and freshwater species, whereas NMFS manages marine and anadromous species.

Section 9 of the ESA and its implementing regulations prohibit the “take” of any fish or wildlife species listed under the ESA as endangered or threatened, unless otherwise authorized by federal regulations. The ESA defines the term “take” to mean “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct” (16 USC Section 1532). Section 7 of the ESA (16 USC Section 1531 *et seq.*) outlines the procedures for federal interagency cooperation to conserve federally listed species and designated critical habitats. Section 10(a)(1)(B) of the ESA provides a process by which nonfederal entities may obtain an incidental take permit from USFWS or NMFS for otherwise lawful activities that incidentally may result in “take” of endangered or threatened species, subject to specific conditions. A habitat conservation plan (HCP) must accompany an application for an incidental take permit.

**Migratory Bird Treaty Act**

The Migratory Bird Treaty Act (MBTA) (16 USC, Chapter 7, Subchapter II) protects migratory birds. Most actions that result in take, or the permanent or temporary possession of, a migratory bird constitute violations of the MBTA. The MBTA also prohibits destruction of occupied nests. USFWS is responsible for overseeing compliance with the MBTA.

### Bald and Golden Eagle Protection Act

The federal Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), first enacted in 1940, prohibits "taking" bald eagles, including their parts, nests, or eggs. The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." The definition for "Disturb" includes injury to an eagle, a decrease in its productivity, or nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior. In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present.

### Clean Water Act

Clean Water Act (CWA) section 404 regulates the discharge of dredged and fill materials into waters of the U.S., which include all navigable waters, their tributaries, and some isolated waters, as well as some wetlands adjacent to the aforementioned waters (33 CFR Section 328.3). Areas typically not considered to be jurisdictional waters include non-tidal drainage and irrigation ditches excavated on dry land, artificially irrigated areas, artificial lakes or ponds used for irrigation or stock watering, small artificial waterbodies such as swimming pools, vernal pools, and water-filled depressions (33 CFR Part 328). Areas meeting the regulatory definition of waters of the U.S. are subject to the jurisdiction of U.S. Army Corps of Engineers (USACE) under the provisions of CWA Section 404. Construction activities involving placement of fill into jurisdictional waters of the U.S. are regulated by USACE through permit requirements. No USACE permit is effective in the absence of state water quality certification pursuant to Section 401 of CWA.

Section 401 of the CWA requires an evaluation of water quality when a proposed activity requiring a federal license or permit could result in a discharge to waters of the U.S. In California, the State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs) issue water quality certifications. Each RWQCB is responsible for implementing Section 401 in compliance with the CWA and its water quality control plan (also known as a Basin Plan). Applicants for a federal license or permit to conduct activities that may result in the discharge to waters of the U.S. (including wetlands or vernal pools) must also obtain a Section 401 water quality certification to ensure that any such discharge will comply with the applicable provisions of the CWA.

### ***State Laws, Regulations, and Policies***

#### California Fish and Game Code

The California Fish and Game Code includes various statutes that protect biological resources, including the Native Plant Protection Act of 1977 (NPPA) and the California Endangered Species Act (CESA). The NPPA (California Fish and Game Code Section 1900-1913) authorizes the Fish and Game Commission to designate plants as endangered or rare and prohibits take of any such plants, except as authorized in limited circumstances.

CESA (California Fish and Game Code Section 2050–2098) prohibits state agencies from approving a project that would jeopardize the continued existence of a species listed under CESA as endangered or threatened. Section 2080 of the California Fish and Game Code prohibits the take of any species that is state listed as endangered or threatened or designated as a candidate for such listing. California Department of Fish and Wildlife (CDFW) may issue an incidental take permit authorizing the take of listed and candidate species if that take is incidental to an otherwise lawful activity, subject to specified conditions.

California Fish and Game Code Section 3503, 3513, and 3800 protect native and migratory birds, including their active or inactive nests and eggs, from all forms of take. In addition, Section 3511, 4700, 5050, and 5515 identify species that are fully protected from all forms of take. Section 3511 lists fully protected birds, Section 5515 lists fully protected fish, Section 4700 lists fully protected mammals, and Section 5050 lists fully protected amphibians.

### Streambed Alteration Agreement

Sections 1601 to 1606 of the California Fish and Game Code require that a Streambed Alteration Application be submitted to CDFW for any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake. As a general rule, this requirement applies to any work undertaken within the 100-year floodplain of a stream or river containing fish or wildlife resources.

### California Native Plant Protection Act

The California Native Plant Protection Act (California Fish and Game Code Section 1900–1913) prohibits the taking, possessing, or sale of any plants with a state designation of rare, threatened, or endangered (as defined by CDFW). The California Native Plant Society (CNPS) maintains a list of plant species native to California that has low population numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Plants of California (CNPS 2001). Potential impacts to populations of CNPS-listed plants receive consideration under CEQA review.

### Forest Practice Act

Logging on private and corporate land in California is regulated by the Z'berg-Nejedly Forest Practices Act (FPA), which took effect January 1, 1974. The act established the Forest Practice Rules (FPRs) and a politically-appointed Board of Forestry to oversee their implementation. CALFIRE works under the direction of the Board of Forestry and is the lead government agency responsible for approving logging plans and for enforcing the FPRs. A Timber Harvest Plan (THP) must be prepared by a Registered Professional Forester (RPF) for timber harvest on virtually all non-federal land. The FPA also established the requirement that all non-federal forests cut in the State be regenerated with at least three hundred stems per acre on high site lands, and one hundred fifty trees per acre on low site lands.

### ***Local Laws, Regulations, and Policies***

The County General Plan also include policies that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that address potential impacts on special status plant species or create opportunities for habitat improvement. The El Dorado County General Plan designates the Important Biological Corridor (IBC) (Exhibits 5.12-14, 5.12-5 and 5.12-7, El Dorado County, 2003). Lands located within the overlay district are subject to the following provisions, given that they do not interfere with agricultural practices:

- Increased minimum parcel size;
- Higher canopy-retention standards and/or different mitigation standards/thresholds for oak woodlands;
- Lower thresholds for grading permits;
- Higher wetlands/riparian retention standards and/or more stringent mitigation requirements for wetland/riparian habitat loss;
- Increased riparian corridor and wetland setbacks;
- Greater protection for rare plants (e.g., no disturbance at all or disturbance only as recommended by U.S. Fish and Wildlife Service/California Department of Fish and Wildlife);
- Standards for retention of contiguous areas/large expanses of other (non-oak or non-sensitive) plant communities;
- Building permits discretionary or some other type of “site review” to ensure that canopy is retained;
- More stringent standards for lot coverage, floor area ratio (FAR), and building height; and
- No hindrances to wildlife movement (e.g., no fences that would restrict wildlife movement).

**Discussion:** A substantial adverse effect on Biological Resources would occur if the implementation of the project would:

- Substantially reduce or diminish habitat for native fish, wildlife or plants;
- Cause a fish or wildlife population to drop below self-sustaining levels;
- Threaten to eliminate a native plant or animal community;

- Reduce the number or restrict the range of a rare or endangered plant or animal;
- Substantially affect a rare or endangered species of animal or plant or the habitat of the species; or
- Interfere substantially with the movement of any resident or migratory fish or wildlife species.

- a. **Special Status Species:** Based on review of the California Natural Diversity Database (CNDDDB) and of the County Geographic Information System (GIS), the project site is not located within a sensitive natural community of the County, State or Federal agency, including but not limited to an Ecological Preserve, Important Biological Corridor (IBC), or the U.S. Fish and Wildlife Service (USFWS) Recovery Plan boundaries. A Botanical Survey was prepared for the project by Sycamore Environmental Consultants, Inc., dated November 1, 2019; a Botanical Resources Technical Memorandum was prepared by SWCA Environmental Consultants, Inc., dated January 11, 2023; and a Biological Resources Technical Memorandum was prepared by SWCA Environmental Consultants dated June 13, 2023. (Attachments 14, 15, and 16). The 7.31-acre site conditions include California annual grassland (5.91-acres), mixed oak woodland (0.80-acre), and ruderal/disturbed (0.35-acre). The southernmost portion of the site has been previously disturbed and largely barren aside from ruderal plants. Mixed oak woodland occurs in the northwest corner of the property. Based on the summary of the reports, no special status plant species were observed during focused botanical surveys and special status plant species are presumed absent from the site. The property is located in Mitigation Area 1 which are lands within an area described as a rare soils study area. Although the survey did not identify any special status plant species that could be present on gabbro soils, the property owner would pay the Mitigation Area 1 ecological preserve fee at the time of future building permits. The potential is low for the presence of special status wildlife species due to the on-site habitat, history of disturbance, and the project site is surrounded by existing development which serves as a barrier to wildlife movement. Although no special status species were identified during the field survey, the on-site trees and project area could provide suitable habitat for special status wildlife species including grasshopper sparrow, burrowing owl, Swainson's hawk, and White-tailed kite. Implementation of the following mitigation measure would reduce impacts to less than significant and shall be noted on the improvement plans:

**MM BIO-1      Special Status Wildlife - Nesting Raptors and Migratory Birds  
Preconstruction Survey**

When commercial office/warehouse building development is proposed, the following mitigation measures shall be implemented to avoid impacts to special status species:

- a) If oak tree removal occurs at any time during the typical nesting season (February 15-September 15) a pre-construction survey shall be prepared by a qualified biologist no more than 15 days prior to initiation of proposed development activities. If active nests are found on or immediately adjacent to the site, the biologist shall contact the California Department Fish & Wildlife as appropriate to determine appropriate avoidance measures. If no nesting is found to occur, necessary oak tree removal could then proceed for review and compliance with the standard requirements for oak tree removal, which would be reviewed at time of future building permit submittal.

Monitoring Requirement: Planning Division shall verify completion of the requirement prior to issuance of grading and building permits in coordination with the applicant.

Monitoring Responsibility: El Dorado County Planning and Building Department, Planning Division.

- b. **Riparian Habitat and Wetlands:** Based on review of the of the County Geographic Information System (GIS), there are no identified riparian habitat or wetlands located on the project site. The vegetation is ruderal/disturbed and dominated by California annual grassland with many nonnative invasive plant species. No wetlands or other aquatic resources are present on-site. The impacts would be less than significant.

- c. **Federally Protected Wetlands:** The project site is not located in federally protected wetlands and would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. Any activity causing direct adverse impacts require resource permits from the Army Corps of Engineers, the Regional Water Quality Control Board (401; WDR), and/or the California Department of Fish & Wildlife (1602). Further, Zoning Ordinance Section 130.30.050 - Setback Requirements and Exceptions requires minimum setbacks from any intermittent stream, wetland, or sensitive riparian habitat, which would apply to future development, if applicable. The impacts would be less than significant.
- d. **Migration Corridors:** Review of the California Department of Fish and Wildlife Migratory Deer Herd Maps and General Plan DEIR Exhibit 5.12-7 indicate that the deer herd migration corridor does not extend over the project site. The El Dorado County General Plan does not identify the project site within an Important Biological Corridor (IBC). The proposed project would not substantially interfere with the movement of any native resident or migratory fish or wildlife species, or with any established native resident or migratory wildlife corridors or impede the use of wildlife nursery sites. The impacts would be less than significant.
- e. **Local Policies:** Local protection of biological resources includes the Important Biological Corridor (IBC) overlay, oak woodland preservation, rare plants and special status species, and wetland preservation with the goal to preserve and protect sensitive natural resources within the County. Any future tree removal of oak woodlands, individual native oak trees, or heritage trees, as defined in Section 130.39.030, would be required to comply with Oak Resources Conservation Ordinance of Section 130.39.070.C (Oak Tree and Oak Woodland Removal Permits), which would be reviewed at time of grading/building permit submittal.

The project site is not located within an Important Biological Corridor (IBC) overlay or an Ecological Preserve (EP) overlay area. The proposed development would be required to comply with all applicable County ordinances and policies regarding oak woodland conservation. The impacts would be less than significant.

Based upon the Arborist Report prepared by Foothill Forest Care Consulting Arborists with report dated April 27, 2023 (Attachment 9), there are nine oak trees toward the northwestern corner of the parcel. Two of the oak trees are located in the proposed area of disturbance. There is also one oak shrub in the proposed area of disturbance. Implementation of the following mitigation measures would reduce impacts to less than significant and shall be noted on the improvement plans:

**MM BIO-2      On-Site Replacement of Oak Trees**

When commercial office/warehouse building development is proposed, the following mitigation measures shall be implemented to reduce impacts to oak trees on-site:

- a) The total replacement trees shall have a combined diameter of the trees removed. Replacement tree species shall be the same proportion as those removed. Replacement trees shall be planted on-site and monitored and maintained for a period of 7 years, calculated from the day of planting. Replacement plantings shall be inspected, maintained, and documented consistent with requirements for Mitigation Maintenance, Monitoring, and Reporting;
- b) The mitigation can be fulfilled by planting 14 valley oaks, in the 15-gallon size. These trees are about 1-inch in diameter each. These trees shall be planted in an area that will be monitored for a period of seven (7) years as specified in the El Dorado County Oak Resource Management Plan (ORMP);
- c) Tree protection during development. During the construction phase, oak trees and any required protection zones must be monitored by an arborist regularly. Access to

the construction site shall be made available to the arborist to confirm requirements are properly followed. Oak trees in proximity of construction which are not identified for removal shall be protected by a minimum four (4- foot) tall fencing along canopy dripline. Oak trees not identified for removal but having a canopy that overhangs the proposed construction shall be fenced at a minimum distance from the trunk that is equal to one foot (1-foot) for each inch of tree diameter. Fenced area to be kept free of building materials, waste, and excess oil, and any soil disturbing activities within the fenced area should be monitored. Also refer to Appendix C of Arborist Report (Attachment 9).

**Monitoring Requirement:** Planning Division shall verify completion of the requirement prior to issuance of grading and building permits and conduct ongoing periodic inspections for seven (7) years in coordination with the applicant.

**Monitoring Responsibility:** El Dorado County Planning and Building Department, Planning Division.

- f. **Adopted Plans:** The proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, or other approved local, regional, or state habitat conservation plan. There would be no impact.

**Finding:** Construction of the proposed office/warehouse buildings would be required to comply with applicable County codes and policies which would be reviewed at time of submittal of the grading and building permits. With the implementation of Mitigation Measures, MM BIO-1 and MM BIO-2, potential impacts to biological resources from the proposed development would be mitigated to a level of less than significant.

V. CULTURAL RESOURCES. <i>Would the project:</i>				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?			X	
b. Cause a substantial adverse change in the significance of archaeological resource pursuant to Section 15064.5?			X	
c. Disturb any human remains, including those interred outside of formal cemeteries?			X	

**Regulatory Setting:**

***Federal Laws, Regulations, and Policies***

**The National Register of Historic Places**

The National Register of Historic Places (NRHP) is the nation's master inventory of known historic resources. The NRHP is administered by the National Park Service and includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level. The criteria for listing in the NRHP include resources that:



- A. Are associated with events that have made a significant contribution to the broad patterns of history (events);
- B. Are associated with the lives of persons significant in our past (persons);
- C. Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction (architecture); or
- D. Have yielded or may likely yield information important in prehistory or history (information potential).

### ***State Laws, Regulations, and Policies***

#### **California Register of Historical Resources**

Public Resources Code Section 5024.1 establishes the CRHR. The register lists all California properties considered to be significant historical resources. The CRHR includes all properties listed as or determined to be eligible for listing in the National Register of Historic Places (NRHP), including properties evaluated under Section 106 of the National Historic Preservation Act. The criteria for listing are similar to those of the NRHP. Criteria for listing in the CRHR include resources that:

- A. Are associated with the events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- B. Are associated with the lives of persons important in our past;
- C. Embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possess high artistic values; or
- D. Have yielded, or may be likely to yield, information important in prehistory or history.

The regulations set forth the criteria for eligibility as well as guidelines for assessing historical integrity and resources that have special considerations.

#### **The California Register of Historic Places**

The California Register of Historic Places (CRHP) program encourages public recognition and protection of resources of architectural, historical, archeological and cultural significance, identifies historical resources for state and local planning purposes, determines eligibility for state historic preservation grant funding and affords certain protections under the California Environmental Quality Act. The criteria for listing in the CRHP include resources that:

- A. Are associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.
- B. Are associated with the lives of persons important to local, California or national history.
- C. Embody the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values.
- D. Have yielded, or have the potential to yield, information important to the prehistory or history of the local area, California or the nation.

The State Office of Historic Preservation sponsors the California Historical Resources Information System (CHRIS), a statewide system for managing information on the full range of historical resources identified in California. CHRIS provides an integrated database of site-specific archaeological and historical resources information. The State Office of Historic Preservation also maintains the California Register of Historical Resources (CRHR), which identifies the State's architectural, historical, archeological and cultural resources. The CRHR includes properties listed in or formally determined eligible for the National Register and lists selected California Registered Historical Landmarks.

Public Resources Code (Section 5024.1[B]) states that any agency proposing a project that could potentially impact a resource listed on the CRHR must first notify the State Historic Preservation Officer, and must work with the officer to ensure that the project incorporates "prudent and feasible measures that will eliminate or mitigate the adverse effects."

California Health and Safety Code Section 7050.5 requires that, in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission.

Section 5097.98 of the California Public Resources Code stipulates that whenever the commission receives notification of a discovery of Native American human remains from a county coroner pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, it shall immediately notify those persons it believes to be most likely descended from the deceased Native American. The decedents may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The descendants shall complete their inspection and make their recommendation within 24 hours of their notification by the Native American Heritage Commission. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

#### CEQA and CEQA Guidelines

Section 21083.2 of CEQA requires that the lead agency determine whether a project may have a significant effect on unique archaeological resources. A unique archaeological resource is defined in CEQA as an archaeological artifact, object, or site about which it can be clearly demonstrated that there is a high probability that it:

- Contains information needed to answer important scientific research questions, and there is demonstrable public interest in that information;
- Has a special or particular quality, such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important indigenous or historic event or person.
- Although not specifically inclusive of paleontological resources, these criteria may also help to define “a unique paleontological resource or site.”

Measures to avoid, conserve, preserve, or mitigate significant effects on these resources are also provided under CEQA Section 21083.2.

Section 15064.5 of the CEQA Guidelines notes that “a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.” Substantial adverse changes include physical changes to the historic resource or to its immediate surroundings, such that the significance of the historic resource would be materially impaired. Lead agencies are expected to identify potentially feasible measures to mitigate significant adverse changes in the significance of a historic resource before they approve such projects. Historic resources are those that are:

- Listed in, or determined to be eligible for listing in, the California Register of Historical Resources (CRHR) (Public Resources Code Section 5024.1[k]);
- Included in a local register of historic resources (Public Resources Code Section 5020.1) or identified as significant in an historic resource survey meeting the requirements of Public Resources Code Section 5024.1(g); or
- Determined by a lead agency to be historically significant.

CEQA Guidelines Section 15064.5 also prescribes the processes and procedures found under Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.95 for addressing the existence of, or probable

likelihood of, Native American human remains, as well as the unexpected discovery of any human remains within the project site. This includes consultation with the appropriate Native American tribes.

CEQA Guidelines Section 15126.4 provides further guidance about minimizing effects to historical resources through the application of mitigation measures. Mitigation measures must be legally binding and fully enforceable.

The lead agency having jurisdiction over a project is also responsible to ensure that paleontological resources are protected in compliance with CEQA and other applicable statutes. Paleontological and historical resource management is also addressed in Public Resources Code Section 5097.5, "Archaeological, Paleontological, and Historical Sites." This statute defines as a misdemeanor any unauthorized disturbance or removal of a fossil site or remains on public land and specifies that state agencies may undertake surveys, excavations, or other operations as necessary on state lands to preserve or record paleontological resources. This statute would apply to any construction or other related project impacts that would occur on state-owned or state-managed lands. The County General Plan contains policies describing specific, enforceable measures to protect cultural resources and the treatment of resources when found.

**Discussion:** In general, significant impacts are those that diminish the integrity, research potential, or other characteristics that make a historical or cultural resource significant or important. A substantial adverse effect on Cultural Resources would occur if the implementation of the project would:

- Disrupt, alter, or adversely affect an indigenous, or historic archaeological site or property that is historically or culturally significant to a community or ethnic or social group; or a paleontological site except as a part of a scientific study;
- Affect a landmark of cultural/historical importance;
- Conflict with established recreational, educational, religious or scientific uses of the area; or
- Conflict with adopted environmental plans and goals of the community where it is located.

a.-c. **Historic, Archeological Resources, Human Remains.** A Cultural Resource record search was conducted at the North Central Information Center (NCIC) of the CHRIS on October 28, 2019. A Cultural Resource Study was prepared by Historic Resource Associates with report dated October 2019. The field investigation indicated that no significant indigenous or historic archaeological sites, features, or artifacts were found, nor any significant historic buildings, structures, or objects discovered, and no further cultural resource work was recommended. In the event of human remains discovery during any future construction if additional structures are built, standard conditions of approval to address accidental discovery of human remains would apply during any grading activities. The project is subject to the cultural resources provisions of CEQA Assembly Bill 52 (AB 52), which requires Native American outreach. Pursuant to AB 52, the County solicited input from Native American organizations and representatives listed with the Native American Heritage Commission to identify cultural resources and properties of concern to the Native American Community. At the time of the initial review consultation, seven tribes were notified of the proposed project: Ione Band of Miwok Indians, Nashville-El Dorado Miwok, Shingle Springs Band of Miwok Indians, Tsi Akim Maidu, UAIC, Washoe Tribe of Nevada and California, and Wilton Rancheria. The Tribes were notified of the proposed project by certified mail on November 28, 2022. The Shingle Springs Band of Miwok Indians and UAIC responded within 30 days to initiate consultation. Staff provided the tribes with the cultural resources record search results and Cultural Resources Study for their review. Staff confirmed conclusion of consultation via email on June 30, 2023. Standard protective conditions of approval will be incorporated with the project. The impacts would be less than significant.

**FINDING:** Standard protective conditions of approval would apply in the event of any cultural resource discovery during future construction, and that construction would stop immediately, and the Archaeologist and Tribes would be notified. Therefore, as conditioned, the project would have a less than significant impact to Cultural Resources.

<b>VI. ENERGY. Would the project:</b>				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Result in potential significant environmental impacts 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	

### **Regulatory Setting**

#### ***Federal Energy Policy Act of 2005***

The Federal Energy Policy Act of 2005 (EP Act) was intended to establish a comprehensive, long-term energy policy and is implemented by the U.S. Department of Energy (U.S. DOE). The EP Act addresses energy production in the U.S., including oil, gas, coal, and alternative forms of energy and energy efficiency and tax incentives. Energy efficiency and tax incentive programs include credits for the construction of new energy efficient homes, production or purchase of energy efficient appliances, and loan guarantees for entities that develop or use innovative technologies that avoid the production of greenhouse gases (GHG).

#### ***State Laws, Regulations, and Policies***

California Building Standards Code (Title 24, California Code of Regulations), including California Energy Code (Title 24, Part 6), and California Green Building Standards Code (Title 24, Part 11, CALGreen)

California Code of Regulations, Title 24, Part 6, is the California Energy Code and associated regulations in CALGreen, are revised regularly by the California Energy Commission (CEC). California Code of Regulations, Title 24, Part 11, is the California Green Building Standards Code (also referred to as CALGreen) and refers to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure. Title 24, Part 11 establishes voluntary standards that became mandatory in the 2010 edition of the code, and include planning and design for sustainable site development, energy efficiency, water conservation, material conservation, and internal air contaminants. The standards offer builders better windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses. Title 24 California Building Standards Code applies to all new development and there are no substantive waivers available that would exempt development from its energy efficiency requirements. Title 24 California Building Standards Code is revised on a regular basis, the most current edition 2024, and each revision increasing the required level of energy efficiency.

#### Senate Bills 1078/107 and Senate Bill 2—Renewables Portfolio Standard

Senate Bill (SB) 1078 and SB 107, California's Renewables Portfolio Standard (RPS), obligates investor-owned utilities (IOUs), energy service providers (ESPs), and Community Choice Aggregations (CCAs) to procure an additional 1% of retail sales per year from eligible renewable sources until 20% is reached, no later than 2010. The California Public Utilities Commission (CPUC) and CEC are jointly responsible for implementing the program. SB 2 (2011) set forth a longer range target of procuring 33% of retail sales by 2020. Implementation of the RPS will conserve nonrenewable fossil fuel resources by generated a greater percentages of statewide electricity from renewable resources, such as wind, solar, and hydropower.

Assembly Bill (AB) 1881 (Chapter 559, Statutes of 2006)

Water conservation reduces energy use by reducing the energy cost of moving water from its source to its user. Assembly Bill (AB) 1881 (Chapter 559, Statutes of 2006) requires the Department of Water Resources (DWR) to adopt an Updated Model Water Efficient Landscape Ordinance (MWELo) and local agencies to adopt DWR's MWELo or a local water efficient landscape ordinance by January 1, 2010 and notify DWR of their adoption (Government Code Section 65595). The water efficient landscape ordinance would apply to sites that are supplied by public water as well as those supplied by private well. Local adoption and implementation of a water efficient landscape ordinance would reduce per capita water use from new development.

Senate Bill X7-7 (Chapter 4, Statutes of 2009)

SB X7-7 (Chapter 4, Statutes of 2009), the Water Conservation Act of 2009, establishes an overall goal of reducing statewide per capita urban water use by 20% by December 31, 2020 (with an interim goal of at least 10% by December 31, 2015). This statute applies to both EID and the Georgetown Divide Public Utilities District (GDPUD). EID has incorporated this mandate into its water supply planning, as represented in its Urban Water Management Plan 2010 Update (El Dorado Irrigation District 2011) and all subsequent water supply plans. Reducing water use results in a reduction in energy demand that would otherwise be used to transport and treat water before delivery to the consumer.

Assembly Bill 2076, Reducing Dependence on Petroleum

The CEC and Air Resources Board (ARB) are directed by AB 2076 (passed in 2000) to develop and adopt recommendations for reducing dependence on petroleum. A performance-based goal is to reduce petroleum demand to 15% less than 2003 demand by 2020.

Senate Bill 375—Sustainable Communities Strategy

SB 375 was adopted with a goal of reducing fuel consumption and GHG emissions from cars and light trucks. Each metropolitan planning organization (MPO) across California is required to develop a sustainable communities strategy (SCS) as part of their regional transportation plan (RTP) to meet the region's GHG emissions reduction target, as set by the California Air Resources Board. The Sacramento Area Council of Governments (SACOG) is the MPO for the Sacramento region, including the western slope of El Dorado County. SACOG adopted its SB 375-compliant Metropolitan Transportation Plan/Sustainable Communities Strategy 2035 in April 2012.

Assembly Bill 1493—Pavley Rules (2002, Amendments 2009, 2012 rule-making)

AB 1493 required the ARB to adopt vehicle standards that will improve the efficiency of light duty autos and lower GHG emissions to the maximum extent feasible beginning in 2009. Additional strengthening of the Pavley standards (referred to previously as "Pavley II," now referred to as the "Advanced Clean Cars" measure) has been proposed for vehicle model years 2017–2025. Together, the two standards are expected to increase average fuel economy to roughly 54.5 miles per gallon by 2025. The improved energy efficiency of light duty autos will reduce statewide fuel consumption in the transportation sector.

CEQA and CEQA Guidelines

Section 15126.2(b) of the CEQA Guidelines requires detailed analysis of a project's energy impacts. If analysis of the project's energy use reveals that the project may result in significant environmental effects due to wasteful, inefficient, or unnecessary use of energy, or wasteful use of energy resources, the environmental document shall prescribe mitigation for those impacts. This analysis should include the project's energy use for all project phases and components, including transportation-related energy, during construction and operation. In addition to building code compliance, other relevant considerations may include, among others, the project's size, location, orientation, equipment use and any renewable energy features that could be incorporated into the project.

CEQA Guidelines, Appendix F: Energy Conservation

CEQA requires EIRs to include a discussion of potential energy impacts and energy conservation measures. Appendix F, Energy Conservation, of the State CEQA Guidelines outlines energy impact possibilities and potential conservation measures designed to assist in the evaluation of potential energy impacts of proposed projects. Appendix F places "particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy," and further indicates this may result in an unavoidable adverse effect on energy conservation. Moreover, the State CEQA Guidelines state that significant energy impacts should be "considered in an EIR to the extent relevant and applicable to the project."

Mitigation for potential significant energy impacts (if required) could include implementing a variety of strategies, including measures to reduce wasteful energy consumption and altering project siting to reduce energy consumption.

***Local Laws, Regulations, and Policies***

The County General Plan Public Services and Utilities Element includes goals, objectives, and policies related to energy conservation associated with the County's future growth and development. Among these are is Objective 5.6.2

(Encourage Energy-Efficient Development) which applies to energy-efficient buildings, subdivisions, development and landscape designs. Associated with Objective 5.6.2 are two policies specifically addressing energy conservation:

Policy 5.6.2.1: Requires energy conserving landscaping plans for all projects requiring design review or other discretionary approval.

Policy 5.6.2.2: All new subdivisions should include design components that take advantage of passive or natural summer cooling and/or winter solar access, or both, when possible.

Further, the County has other goals and policies that would conserve energy even though not being specifically drafted for energy conservation purposes (e.g., Objective 6.7.2, Policy 6.7.2.3).

**Discussion:**

- a. **Unnecessary Consumption:** Project-related construction and operation would be required to comply with applicable energy legislation, policies, and standards for the purpose of reducing energy consumption and improving efficiency (i.e., reducing wasteful and inefficient use of energy) as described in the Regulatory Setting. The proposed project would conform to building codes and other state and local energy conservation measures described in the Regulatory Setting. With adherence to the above-mentioned codes and regulations, any potential impacts would be less than significant.
- b. **Conflict with Energy Plans:** Development of the project would be consistent with all applicable state and local plans for renewable energy or energy efficiency and will not obstruct implementation of applicable energy plans. Any potential impacts would be less than significant.

**FINDING:** The project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation. The project would be consistent with all applicable state and local plans for renewable energy or energy efficiency. For this Energy category, any potential impacts would be anticipated to be less than significant.

<b>VII.GEOLOGY AND SOILS. <i>Would the project:</i></b>				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			<b>X</b>	
ii) Strong seismic ground shaking?			<b>X</b>	

<b>VII.GEOLOGY AND SOILS. <i>Would the project:</i></b>				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?			X	
b. Result in substantial soil erosion or the loss of topsoil?			X	
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) creating substantial risks to life or property?			X	
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	

**Regulatory Setting:**

**Federal Laws, Regulations, and Policies**

**National Earthquake Hazards Reduction Act**

The National Earthquake Hazards Reduction Act of 1977 (Public Law 95-124) and creation of the National Earthquake Hazards Reduction Program (NEHRP) established a long-term earthquake risk-reduction program to better understand, predict, and mitigate risks associated with seismic events. The following four federal agencies are responsible for coordinating activities under NEHRP: USGS, National Science Foundation (NSF), Federal Emergency Management Agency (FEMA), and National Institute of Standards and Technology (NIST). Since its inception, NEHRP has shifted its focus from earthquake prediction to hazard reduction. The current program objectives (NEHRP 2009) are to:

1. Develop effective measures to reduce earthquake hazards;
2. Promote the adoption of earthquake hazard reduction activities by federal, state, and local governments; national building standards and model building code organizations; engineers; architects; building owners; and others who play a role in planning and constructing buildings, bridges, structures, and critical infrastructure or "lifelines";
3. Improve the basic understanding of earthquakes and their effects on people and infrastructure through interdisciplinary research involving engineering; natural sciences; and social, economic, and decision sciences; and
4. Develop and maintain the USGS seismic monitoring system (Advanced National Seismic System); the NSF-funded project aimed at improving materials, designs, and construction techniques (George E. Brown Jr. Network for Earthquake Engineering Simulation); and the global earthquake monitoring network (Global Seismic Network).



Implementation of NEHRP objectives is accomplished primarily through original research, publications, and recommendations and guidelines for state, regional, and local agencies in the development of plans and policies to promote safety and emergency planning.

### **State Laws, Regulations, and Policies**

#### **Alquist–Priolo Earthquake Fault Zoning Act**

The Alquist–Priolo Earthquake Fault Zoning Act (Public Resources Code Section 2621 *et seq.*) was passed to reduce the risk to life and property from surface faulting in California. The Alquist–Priolo Act prohibits construction of most types of structures intended for human occupancy on the surface traces of active faults and strictly regulates construction in the corridors along active faults (earthquake fault zones). It also defines criteria for identifying active faults, giving legal weight to terms such as “active,” and establishes a process for reviewing building proposals in and adjacent to earthquake fault zones. Under the Alquist–Priolo Act, faults are zoned and construction along or across them is strictly regulated if they are “sufficiently active” and “well defined.” Before a project can be permitted, cities and counties are required to have a geologic investigation prepared to demonstrate that the proposed buildings would not be constructed across active faults.

Historical seismic activity and fault and seismic hazards mapping in the project vicinity indicate that the area has relatively low potential for seismic activity (El Dorado County 2003). No active faults have been mapped in the project area, and none of the known faults have been designated as an Alquist–Priolo Earthquake Fault Zone.

#### **Seismic Hazards Mapping Act**

The Seismic Hazards Mapping Act of 1990 (Public Resources Code Sections 2690–2699.6) establishes statewide minimum public safety standards for mitigation of earthquake hazards. While the Alquist–Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including strong ground shaking, liquefaction, and seismically induced landslides. Its provisions are similar in concept to those of the Alquist–Priolo Act. The state is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other seismic hazards, and cities and counties are required to regulate development within mapped seismic hazard zones. In addition, the act addresses not only seismically induced hazards but also expansive soils, settlement, and slope stability.

Mapping and other information generated pursuant to the SHMA is to be made available to local governments for planning and development purposes. The State requires: (1) local governments to incorporate site-specific geotechnical hazard investigations and associated hazard mitigation, as part of the local construction permit approval process; and (2) the agent for a property seller or the seller if acting without an agent, must disclose to any prospective buyer if the property is located within a Seismic Hazard Zone. Under the Seismic Hazards Mapping Act, cities and counties may withhold the development permits for a site within seismic hazard zones until appropriate site-specific geologic and/or geotechnical investigations have been carried out and measures to reduce potential damage have been incorporated into the development plans.

#### **California Building Standards Code**

Title 24 CCR, also known as the California Building Standards Code (CBC), specifies standards for geologic and seismic hazards other than surface faulting. These codes are administered and updated by the California Building Standards Commission. CBC specifies criteria for open excavation, seismic design, and load-bearing capacity directly related to construction in California.

**Discussion:** A substantial adverse effect on Geologic Resources would occur if the implementation of the project would:

- Allow substantial development of structures or features in areas susceptible to seismically induced hazards such as groundshaking, liquefaction, seiche, and/or slope failure where the risk to people and property resulting from earthquakes could not be reduced through engineering and construction measures in accordance with regulations, codes, and professional standards;
- Allow substantial development in areas subject to landslides, slope failure, erosion, subsidence, settlement, and/or expansive soils where the risk to people and property resulting from such geologic hazards could not be reduced through engineering and construction measures in accordance with regulations, codes, and professional standards; or
- Allow substantial grading and construction activities in areas of known soil instability, steep slopes, or shallow depth to bedrock where such activities could result in accelerated erosion and sedimentation or exposure of people, property, and/or wildlife to hazardous conditions (e.g., blasting) that could not be mitigated through engineering and construction measures in accordance with regulations, codes, and professional standards.

a. **Seismic Hazards:**

i) According to the California Department of Conservation Division of Mines and Geology, there are no Alquist-Priolo fault zones within the west slope of El Dorado County. However, a fault zone is located in the Tahoe Basin and Echo Lakes area. The West Tahoe Fault runs along the base of the range front at the west side of the Tahoe Basin. The West Tahoe Fault has a mapped length of 45 km. South of Emerald Bay the West Tahoe Fault extends onshore as two parallel strands. In the lake, the fault has clearly defined scarps that offset submarine fans, lake-bottom sediments, and the McKinney Bay slide deposits (DOC, 2016). There is clear evidence that the discussed onshore portion of the West Tahoe Fault is active with multiple events in the Holocene and poses a surface rupture hazard. However, because of the distance between the project site and these faults, the impacts would be less than significant.

ii) The potential for seismic ground shaking in the project area would be considered remote for the reason stated in Section i) above. Any potential impacts due to seismic impacts would be addressed through compliance with the Uniform Building Code (UBC). All structures would be built to meet the construction standards of the UBC for the appropriate seismic zone. The impacts would be less than significant.

iii) El Dorado County is considered an area with low potential for seismic activity. There are no landslide, liquefaction, or fault zones (DOC, 2007). The impacts would be less than significant.

iv) All grading activities onsite would be required to comply with the El Dorado County Grading, Erosion Control and Sediment Ordinance. The impacts would be less than significant.

- b. **Soil Erosion:** With new development there is potential for erosion and changes in topography; however, this would be reviewed during the grading permit process. Development activities would need to comply with the El Dorado County Grading, Erosion and Sediment Control Ordinance, including the implementation of pre- and post-construction Best Management Practices (BMPs). Implemented BMPs are required to be consistent with the County's California Stormwater Pollution Prevention Plan (SWPPP) issued by the State Water Resources Control Board to eliminate run-off and erosion and sediment controls.

The El Dorado County Stormwater Coordinator, West Slope reviewed the project and provided comments. The County is subject to the State of CA Phase II MS4 Permit and thus the County's post-construction water quality requirements which follow those outlined in that Permit in Section E.12. Projects typically qualify as small or regulated projects under the MS4 Permit (West Slope Development and Redevelopment Standards and Post Construction Stormwater Plan Requirements) if improvements (i.e., parking lots, rooftops, driveways, etc.) create or replace 2,500 sf or more of impervious surface. Qualifying projects are required to provide treatment of stormwater prior to the water leaving the site or entering a waterbody.

An Erosion and Sediment Control Plan would need to be included in the plan submittal for the proposed project. If the project disturbs an acre or more of land, the Legally Responsible Part (LRP) would be required to obtain Construction General Permit (CGP) coverage through the State Water Resources Control Board (SWRCB). The CGP requires the development and implementation of a Storm Water Pollution

Prevention Plan (SWPPP). Additionally, if manufacturing or other applicable activities occur on site, permit coverage under the SWRCB Industrial General Permit (IGP) may be required. At this time, no specific businesses are proposed therefore these requirements are incorporated as conditions of approval that would apply to future development, as applicable. The impacts would be less than significant.

- c. **Soil Stability:** Based on the Seismic Hazards Mapping Program administered by the California Geological Survey, no portion of El Dorado County is located in a Seismic Hazard Zone or those areas prone to liquefaction and earthquake-induced landslides (DOC, 2013). Therefore, El Dorado County is not considered to be at risk from liquefaction hazards. Lateral spreading is typically associated with areas experiencing liquefaction. Because liquefaction hazards are not present in El Dorado County, the county is not at risk for lateral spreading. All grading activities would comply with the El Dorado County Grading, Erosion Control and Sediment Ordinance. The impacts would be less than significant.
- d. **Expansive Soils:** Expansive soils are those that greatly increase in volume when they absorb water and shrink when they dry out. When buildings are placed on expansive soils, foundations may rise each wet season and fall each dry season. This movement may result in cracking foundations, distortion of structures, and warping of doors and windows. Any development of the site would be required to comply with the El Dorado County Grading, Erosion and Sediment Control Ordinance and the development plans for any homes or other structures would be required to implement the Seismic construction standards. The impacts would be less than significant.
- e. **Septic Capability:** The proposed project would be served by connecting to public water and sewer service from EID. For septic capability, there would be no impacts.
- f. **Paleontological Resources:** The proposed project area is not located in an area that is considered likely to have paleontological resources present. Fossils of plants, animals, or other organisms of paleontological significance have not been discovered within the project area. In this context, the project would not result in impacts to paleontological resources or unique geologic features. In the event subsurface paleontological sites are disturbed during grading activities in the site, standard conditions of approval requiring that all work activities shall be stopped in the event of an unanticipated discovery would ensure that impacts are less than significant. The impacts would be less than significant.

**FINDING:** All grading activities would be required to comply with the El Dorado County Grading, Erosion Control and Sediment Ordinance, and comply with standard conditions of approval included with the project, which would address potential impacts related to soil erosion, landslides, and other geologic impacts. Future development would be required to comply with the Uniform Building Code (UBC) which would address any potential seismic related impacts. For the Geology and Soils category, impacts would be less than significant.

<b>VIII. GREENHOUSE GAS EMISSIONS. <i>Would the project:</i></b>				
	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	

### **Background/Science:**

Cumulative greenhouse gases (GHG) emissions are believed to contribute to an increased greenhouse effect and global climate change, which may result in sea level rise, changes in precipitation, habitat, temperature, wildfires, air pollution levels, and changes in the frequency and intensity of weather-related events. While criteria pollutants and toxic air contaminants are pollutants of regional and local concern (see Section III. Air Quality above); GHG are global pollutants. The primary land-use related GHG are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxides (N<sub>2</sub>O). The individual pollutant's ability to retain infrared radiation represents its "global warming potential" and is expressed in terms of CO<sub>2</sub> equivalents; therefore, CO<sub>2</sub> is the benchmark having a global warming potential of 1. Methane has a global warming potential of 21 and thus has a 21 times greater global warming effect per metric ton of CH<sub>4</sub> than CO<sub>2</sub>. Nitrous Oxide has a global warming potential of 310. Emissions are expressed in annual metric tons of CO<sub>2</sub> equivalent units of measure (i.e., MTCO<sub>2</sub>e/yr). The three other main GHG are Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride. While these compounds have significantly higher global warming potentials (ranging in the thousands), all three typically are not a concern in land-use development projects and are usually only used in specific industrial processes.

### ***GHG Sources***

The primary man-made source of CO<sub>2</sub> is the burning of fossil fuels; the two largest sources being coal burning to produce electricity and petroleum burning in combustion engines. The primary sources of man-made CH<sub>4</sub> are natural gas systems losses (during production, processing, storage, transmission and distribution), enteric fermentation (digestion from livestock) and landfill off-gassing. The primary source of man-made N<sub>2</sub>O is agricultural soil management (fertilizers), with fossil fuel combustion a very distant second. In El Dorado County, the primary source of GHG is fossil fuel combustion mainly in the transportation sector (estimated at 70% of countywide GHG emissions). A distant second are residential sources (approximately 20%), and commercial/industrial sources are third (approximately 7%). The remaining sources are waste/landfill (approximately 3%) and agricultural (<1%).

### **Regulatory Setting:**

#### ***Federal Laws, Regulations, and Policies***

At the federal level, USEPA has developed regulations to reduce GHG emissions from motor vehicles and has developed permitting requirements for large stationary emitters of GHGs. On April 1, 2010, USEPA and the National Highway Traffic Safety Administration (NHTSA) established a program to reduce GHG emissions and improve fuel economy standards for new model year 2012-2016 cars and light trucks. On August 9, 2011, USEPA and the NHTSA announced standards to reduce GHG emissions and improve fuel efficiency for heavy-duty trucks and buses.

#### ***State Laws, Regulations, and Policies***

In September 2006, Governor Arnold Schwarzenegger signed Assembly Bill (AB) 32, the *California Climate Solutions Act of 2006* (Stats. 2006, ch. 488) (Health & Safety Code, Section 38500 et seq.). AB 32 requires a statewide GHG emissions reduction to 1990 levels by the year 2020. AB 32 requires the California Air Resources Board (CARB) to implement and enforce the statewide cap. When AB 32 was signed, California's annual GHG emissions were estimated at 600 million metric tons of CO<sub>2</sub> equivalent (MMTCO<sub>2</sub>e) while 1990 levels were estimated at 427 MMTCO<sub>2</sub>e. Setting 427 MMTCO<sub>2</sub>e as the emissions target for 2020, current (2006) GHG emissions levels must be reduced by 29%. CARB adopted the AB 32 Scoping Plan in December 2008 establishing various actions the state would implement to achieve this reduction (CARB, 2008). The Scoping Plan recommends a community-wide GHG reduction goal for local governments of 15%.

In June 2008, the California Governor's Office of Planning and Research's (OPR) issued a Technical Advisory (OPR, 2008) providing interim guidance regarding a proposed project's GHG emissions and contribution to global climate change. In the absence of adopted local or statewide thresholds, OPR recommends the following approach for analyzing GHG emissions: Identify and quantify the project's GHG emissions, assess the significance of the

impact on climate change; and if the impact is found to be significant, identify alternatives and/or Mitigation Measures that would reduce the impact to less than significant levels (GHG Policies: California Energy Commission CEC 2006, Senate Bill SB 32 California Global Warming Solutions Act of 2016, Executive Order EO B-55-18 Carbon Neutrality by 2045, and AB 1279 California Climate Crisis Act of 2045).

**Discussion:**

CEQA does not provide clear direction on addressing climate change. It requires lead agencies identify project GHG emissions impacts and their “significance,” but is not clear what constitutes a “significant” impact. As stated above, GHG impacts are inherently cumulative, and since no single project could cause global climate change, the CEQA test is if impacts are “cumulatively considerable.” Not all projects emitting GHG contribute significantly to climate change. CEQA authorizes reliance on previously approved plans (i.e., a Climate Action Plan (CAP), etc.) and mitigation programs adequately analyzing and mitigating GHG emissions to a less than significant level. “Tiering” from such a programmatic-level document is the preferred method to address GHG emissions. El Dorado County does not have an adopted CAP or similar program-level document; therefore, the project’s GHG emissions must be addressed at the project-level.

Unlike thresholds of significance established for criteria air pollutants in the EDCAQMD Guide to Air Quality Assessment (2002) (“CEQA Guide”), the EDCAQMD has not adopted GHG emissions thresholds for land use development projects. In the absence of County adopted thresholds, the EDCAQMD recommends using the adopted thresholds of other lead agencies which are based on consistency with statewide goals. Since climate change is a global problem and the location of the individual source of GHG emissions is somewhat irrelevant, it’s appropriate to use thresholds established by other jurisdictions as a basis for impact significance determinations. Projects exceeding these thresholds would have a potentially significant impact and be required to mitigate those impacts to a less than significant level. Until the County adopts a CAP consistent with CEQA Guidelines Section 15183.5, and/or establishes GHG thresholds, the County will follow an interim approach to evaluating GHG emissions utilizing significance criteria adopted by the Sacramento Metropolitan Air Quality Management District (SMAQMD) to determine the significance of GHG emissions.

The SMAQMD has developed a screening table using CalEEMod which allows quick assessment of projects to screen out those below the thresholds as their impacts would be less than significant. For projects below the threshold, no further GHG analysis is required.

- a.-b. The proposed project to develop eight (8) office/warehouse buildings may involve a small increase in GHG production; however, new construction would be required to incorporate modern construction and design features that reduce energy consumption to the extent feasible. Implementation of these features would help reduce potential GHG emissions resulting from the development. Current regulations implemented at issuance of grading and building permits would further ensure that construction related emissions would be reduced to acceptable levels. For example, activities associated with grading and construction would require a Fugitive Dust Mitigation Plan (FDMP). The FDMP would address grading measures and operation of equipment to minimize and reduce the level of defined particulate matter exposure and/or emissions.

Pursuant to the EDCAQM guide, the proposed project would result in operational emissions less than the applicable thresholds of significance and impacts related to operational emissions are anticipated to be less than significant. In review of the California Emissions Estimator Model (CalEEMod) for a comparable size project totaling 82,800 sf showed that operational emissions were below thresholds of significance from the CEQA Guide.

Construction-related emissions would be temporary and below the minimum standard for reporting requirements under AB 32. Any ongoing GHG emissions would be a result of a maximum potential of eight (8) new office/warehouse buildings which would have a negligible cumulative contribution towards statewide and global GHG emissions. The proposed project would not conflict with the objectives of AB 32, or any other applicable plan, policy or regulation, adopted for the purposes of reducing GHG emissions.

According to the SMAQMD screening criteria, the GHG emissions from the proposed project are estimated at less than 1,100 MTCO<sub>2</sub>e/yr which would be less than significant. The warehousing land use 825,000 sf or less would be expected to generate emissions of ROG and NO<sub>x</sub> below the applicable thresholds of significance. The proposed buildings would total 71,672 sf which would be below the screening level for the general office and warehousing land use, and therefore considered less than significant. SMAQMD has determined that projects below the GHG Operational Screening Levels would not exceed the District's construction GHG threshold of significance if the project meets the parameters for the construction NO<sub>x</sub> screening level for projects less than 35-acres or less in size, and the proposed project site is 7.31-acres. With incorporation of standard conditions of approval, the impacts would be less than significant.

**FINDING:** For the Greenhouse Gas Emissions category, with incorporation of standard conditions of approval, the impacts would be less than significant.

<b>IX. HAZARDS AND HAZARDOUS MATERIALS. <i>Would the project:</i></b>				
	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 through 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
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				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	

**Regulatory Setting:**

Hazardous materials and hazardous wastes are subject to extensive federal, state, and local regulations to protect public health and the environment. These regulations provide definitions of hazardous materials; establish reporting requirements; set guidelines for handling, storage, transport, and disposal of hazardous wastes; and require health and safety provisions for workers and the public. The major federal, state, and regional agencies enforcing these regulations are USEPA and the Occupational Safety and Health Administration (OSHA); California Department of

Toxic Substances Control (DTSC); California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA); California Governor's Office of Emergency Services (Cal OES); and El Dorado County AQMD.

### ***Federal Laws, Regulations, and Policies***

#### Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, also called the Superfund Act; 42 USC Section 9601 *et seq.*) is intended to protect the public and the environment from the effects of past hazardous waste disposal activities and new hazardous material spills. Under CERCLA, USEPA has the authority to seek the parties responsible for hazardous materials releases and to ensure their cooperation in site remediation. CERCLA also provides federal funding (through the "Superfund") for the remediation of hazardous materials contamination. The Superfund Amendments and Reauthorization Act of 1986 (Public Law 99-499) amends some provisions of CERCLA and provides for a Community Right-to-Know program.

#### Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act of 1976 (RCRA; 42 USC Section 6901 *et seq.*), as amended by the Hazardous and Solid Waste Amendments of 1984, is the primary federal law for the regulation of solid waste and hazardous waste in the United States. These laws provide for the "cradle-to-grave" regulation of hazardous wastes, including generation, transportation, treatment, storage, and disposal. Any business, institution, or other entity that generates hazardous waste is required to identify and track its hazardous waste from the point of generation until it is recycled, reused, or disposed of.

USEPA has primary responsibility for implementing RCRA, but individual states are encouraged to seek authorization to implement some or all RCRA provisions. California received authority to implement the RCRA program in August 1992. DTSC is responsible for implementing the RCRA program in addition to California's own hazardous waste laws, which are collectively known as the Hazardous Waste Control Law.

#### Energy Policy Act of 2005

Title XV, Subtitle B of the Energy Policy Act of 2005 (the Underground Storage Tank Compliance Act of 2005) contains amendments to Subtitle I of the Solid Waste Disposal Act, the original legislation that created the Underground Storage Tank (UST) Program. As defined by law, a UST is "any one or combination of tanks, including pipes connected thereto, that is used for the storage of hazardous substances and that is substantially or totally beneath the surface of the ground." In cooperation with USEPA, SWRCB oversees the UST Program. The intent is to protect public health and safety and the environment from releases of petroleum and other hazardous substances from tanks. The four primary program elements include leak prevention (implemented by Certified Unified Program Agencies [CUPAs], described in more detail below), cleanup of leaking tanks, enforcement of UST requirements, and tank integrity testing.

#### Spill Prevention, Control, and Countermeasure Rule

USEPA's Spill Prevention, Control, and Countermeasure (SPCC) Rule (40 CFR, Part 112) apply to facilities with a single above-ground storage tank (AST) with a storage capacity greater than 660 gallons, or multiple tanks with a combined capacity greater than 1,320 gallons. The rule includes requirements for oil spill prevention, preparedness, and response to prevent oil discharges to navigable waters and adjoining shorelines. The rule requires specific facilities to prepare, amend, and implement SPCC Plans.

#### Occupational Safety and Health Administration

OSHA is responsible at the federal level for ensuring worker safety. OSHA sets federal standards for implementation of workplace training, exposure limits, and safety procedures for the handling of hazardous substances (as well as other hazards). OSHA also establishes criteria by which each state can implement its own health and safety program.

### Federal Communications Commission Requirements

There is no federally mandated radio frequency (RF) exposure standard; however, pursuant to the Telecommunications Act of 1996 (47 USC Section 224), the Federal Communications Commission (FCC) established guidelines for dealing with RF exposure, as presented below. The exposure limits are specified in 47 CFR Section 1.1310 in terms of frequency, field strength, power density, and averaging time. Facilities and transmitters licensed and authorized by FCC must either comply with these limits or an applicant must file an environmental assessment (EA) with FCC to evaluate whether the proposed facilities could result in a significant environmental effect.

FCC has established two sets of RF radiation exposure limits—Occupational/Controlled and General Population/Uncontrolled. The less-restrictive Occupational/Controlled limit applies only when a person (worker) is exposed as a consequence of his or her employment and is “fully aware of the potential exposure and can exercise control over his or her exposure,” otherwise the General Population limit applies (47 CFR Section 1.1310).

The FCC exposure limits generally apply to all FCC-licensed facilities (47 CFR Section 1.1307[b][1]). Unless exemptions apply, as a condition of obtaining a license to transmit, applicants must certify that they comply with FCC environmental rules, including those that are designed to prevent exposing persons to radiation above FCC RF limits (47 CFR Section 1.1307[b]). Licensees at co-located sites (e.g., towers supporting multiple antennas, including antennas under separate ownerships) must take the necessary actions to bring the accessible areas that exceed the FCC exposure limits into compliance. This is a shared responsibility of all licensees whose transmission power density levels account for 5.0 or more percent of the applicable FCC exposure limits (47 CFR 1.1307[b][3]).

### Code of Federal Regulations (14 CFR) Part 77

14 CFR Part 77.9 is designed to promote air safety and the efficient use of navigable airspace. Implementation of the code is administered by the Federal Aviation Administration (FAA). If an organization plans to sponsor any construction or alterations that might affect navigable airspace, a Notice of Proposed Construction or Alteration (FAA Form 7460-1) must be filed. The code provides specific guidance regarding FAA notification requirements.

### ***State Laws, Regulations, and Policies***

#### Safe Drinking Water and Toxic Enforcement Act of 1986 – Proposition 65

The Safe Drinking Water and Toxic Enforcement Act of 1986, more commonly known as Proposition 65, protects the state’s drinking water sources from contamination with chemicals known to cause cancer, birth defects, or other reproductive harm. Proposition 65 also requires businesses to inform the public of exposure to such chemicals in the products they purchase, in their homes or workplaces, or that are released into the environment. In accordance with Proposition 65, the California Governor’s Office publishes, at least annually, a list of such chemicals. OEHHA, an agency under the California Environmental Protection Agency (CalEPA), is the lead agency for implementation of the Proposition 65 program. Proposition 65 is enforced through the California Attorney General’s Office; however, district and city attorneys and any individual acting in the public interest may also file a lawsuit against a business alleged to be in violation of Proposition 65 regulations.

#### The Unified Program

The Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of six environmental and emergency response programs. CalEPA and other state agencies set the standards for their programs, while local governments (CUPAs) implement the standards. For each county, the CUPA regulates/oversees the following:

- Hazardous materials business plans;
- California accidental release prevention plans or federal risk management plans;
- The operation of USTs and ASTs;
- Universal waste and hazardous waste generators and handlers;



- On-site hazardous waste treatment;
- Inspections, permitting, and enforcement;
- Proposition 65 reporting; and
- Emergency response.

#### Hazardous Materials Business Plans

Hazardous materials business plans are required for businesses that handle hazardous materials in quantities greater than or equal to 55 gallons of a liquid, 500 pounds of a solid, or 200 cubic feet (cf) of compressed gas, or extremely hazardous substances above the threshold planning quantity (40 CFR, Part 355, Appendix A) (Cal OES, 2015). Business plans are required to include an inventory of the hazardous materials used/stored by the business, a site map, an emergency plan, and a training program for employees (Cal OES, 2015). In addition, business plan information is provided electronically to a statewide information management system, verified by the applicable CUPA, and transmitted to agencies responsible for the protection of public health and safety (i.e., local fire department, hazardous material response team, and local environmental regulatory groups) (Cal OES, 2015).

#### California Occupational Safety and Health Administration

Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations in California. Cal/OSHA regulations pertaining to the use of hazardous materials in the workplace (CCR Title 8) include requirements for safety training, availability of safety equipment, accident and illness prevention programs, warnings about exposure to hazardous substances, and preparation of emergency action and fire prevention plans. Hazard communication program regulations that are enforced by Cal/OSHA require workplaces to maintain procedures for identifying and labeling hazardous substances, inform workers about the hazards associated with hazardous substances and their handling, and prepare health and safety plans to protect workers at hazardous waste sites. Employers must also make material safety data sheets available to employees and document employee information and training programs. In addition, Cal/OSHA has established maximum permissible RF radiation exposure limits for workers (Title 8 CCR Section 5085[b]), and requires warning signs where RF radiation might exceed the specified limits (Title 8 CCR Section 5085 [c]).

#### California Accidental Release Prevention

The purpose of the California Accidental Release Prevention (CalARP) program is to prevent accidental releases of substances that can cause serious harm to the public and the environment, to minimize the damage if releases do occur, and to satisfy community right-to-know laws. In accordance with this program, businesses that handle more than a threshold quantity of regulated substance are required to develop a risk management plan (RMP). This RMP must provide a detailed analysis of potential risk factors and associated mitigation measures that can be implemented to reduce accident potential. CUPAs implement the CalARP program through review of RMPs, facility inspections, and public access to information that is not confidential or a trade secret.

#### California Department of Forestry and Fire Protection Wildland Fire Management

The Office of the State Fire Marshal and the CALFIRE administer state policies regarding wildland fire safety. Construction contractors must comply with the following requirements in the Public Resources Code during construction activities at any sites with forest-, brush-, or grass-covered land:

- Earthmoving and portable equipment with internal combustion engines must be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (Public Resources Code Section 4442).
- Appropriate fire-suppression equipment must be maintained from April 1 to December 1, the highest-danger period for fires (Public Resources Code Section 4428).
- On days when a burning permit is required, flammable materials must be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and the construction contractor must maintain the appropriate fire suppression equipment (Public Resources Code Section 4427).

- On days when a burning permit is required, portable tools powered by gasoline fueled internal combustion engines must not be used within 25 feet of any flammable materials (Public Resources Code Section 4431).

#### California Highway Patrol

CHP, along with Caltrans, enforce and monitor hazardous materials and waste transportation laws and regulations in California. These agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roads. All motor carriers and drivers involved in transportation of hazardous materials must apply for and obtain a hazardous materials transportation license from CHP.

#### ***Local Laws, Regulations, and Policies***

A map of the fuel loading in the County (General Plan Figure HS-1) shows the fire hazard severity classifications of the SRAs in El Dorado County, as established by CDF. The classification system provides three classes of fire hazards: Moderate, High, and Very High. Fire Hazard Ordinance (Chapter 8.08) requires defensible space as described by the State Public Resources Code, including the incorporation and maintenance of a 30-foot fire break or vegetation fuel clearance around structures in fire hazard zones. The County's requirements on emergency access, signing and numbering, and emergency water are more stringent than those required by state law. The Fire Hazard Ordinance also establishes limits on campfires, fireworks, smoking, and incinerators for all discretionary and ministerial developments.

**Discussion:** A substantial adverse effect due to Hazards or Hazardous Materials would occur if implementation of the project would:

- Expose people and property to hazards associated with the use, storage, transport, and disposal of hazardous materials where the risk of such exposure could not be reduced through implementation of Federal, State, and local laws and regulations;
  - Expose people and property to risks associated with wildland fires where such risks could not be reduced through implementation of proper fuel management techniques, buffers and landscape setbacks, structural design features, and emergency access; or
  - Expose people to safety hazards as a result of former on-site mining operations.
- a.-c. **Hazardous Materials:** The proposed project would develop eight (8) new office/warehouse buildings and would not involve the routine transportation, use, or disposal of hazardous materials, such as construction materials, paints, fuels, landscaping materials, and household cleaning supplies. Future construction of the buildings could involve some hazardous materials temporarily, but this is considered to be small in scale. Future businesses that locate within the new buildings would be subject to proper State and County permits which would be reviewed for compliance with all applicable safety standards at the time of business license applications and/or building permit review. The impacts would be less than significant.
- d. **Hazardous Sites:** The project site is not included on a list of or near any hazardous materials sites pursuant to Government Code section 65962.5 (DTSC, 2015). There would be no impact.
- e. **Aircraft Hazards, Private Airstrips:** As shown on the El Dorado County Zoning Map, the project is not located within an Airport Safety District combining zone or near a public airport or private airstrip. There would be no impact.
- f. **Emergency Plan:** Access to the project site would be from Business Drive. The EDCFPD reviewed the project and provided comments which will be incorporated as conditions of approval. Additionally, the County DOT reviewed the project and provided comments, which are incorporated as project-specific and standard conditions of approval. No issues were found with the proposed project design. With the incorporation of the conditions of approval, the proposed project would not impair implementation of any emergency response plan or emergency evacuation plan. The impacts would be less than significant.

- g. **Wildfire Hazards:** The project site is in an area of high fire hazard for wildland pursuant to Figure HS-1 of the Fire Hazard rating in the El Dorado County General Plan (2015). The El Dorado County General Plan Safety Element precludes development in areas of high wildland fire hazard unless such development can be adequately protected from wildland fire hazards as demonstrated in a Fire Safe Plan prepared by a Registered Professional Forester (RPF) and approved by the local Fire Protection District and/or California Department of Forestry and Fire Protection. A Wildland Urban Interface Fire Protection Plan was prepared for the project by CDS Fire Prevention Planning, William F. Draper, Registered Professional Forester, report dated June 19, 2023 (Attachment 17). Further, the EDCFPD reviewed the project and provided comments which would be incorporated into the project as conditions of approval. Compliance with the Wildland Urban Interface Fire Protection Plan and the conditions of approval would ensure compliance with applicable Fire Safe Regulations. The impacts would be less than significant.

**FINDING:** For the Hazards and Hazardous Materials category, with compliance with the Fire Safe Regulations contained in the Wildland Urban Interface Fire Protection Plan prepared for the project, and with the incorporation of the conditions of approval from the EDCFPD, the impacts would be less than significant.

<b>X. HYDROLOGY AND WATER QUALITY. Would the project:</b>				
	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 deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			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 drainage systems or provide substantial additional sources of polluted runoff; or			X	
iv. impede or redirect flood flows?			X	
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			X	
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

**Regulatory Setting:**

**Federal Laws, Regulations, and Policies**

Clean Water Act

The Clean Water Act (CWA) is the primary federal law that protects the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. The key sections pertaining to water quality regulation for the Proposed Project are CWA Section 303 and Section 402.

*Section 303(d) — Listing of Impaired Water Bodies*

Under CWA Section 303(d), states are required to identify "impaired water bodies" (those not meeting established water quality standards), identify the pollutants causing the impairment, establish priority rankings for waters on the list, and develop a schedule for the development of control plans to improve water quality. USEPA then approves the State's recommended list of impaired waters or adds and/or removes waterbodies.

*Section 402—NPDES Permits for Stormwater Discharge*

CWA Section 402 regulates construction-related stormwater discharges to surface waters through the NPDES, which is officially administered by USEPA. In California, USEPA has delegated its authority to the State Water Resources Control Board (SWRCB), which, in turn, delegates implementation responsibility to the nine RWQCBs, as discussed below in reference to the Porter-Cologne Water Quality Control Act.

The NPDES program provides for both general (those that cover a number of similar or related activities) and individual (activity- or project-specific) permits. General Permit for Construction Activities: Most construction projects that disturb 1.0 or more acre of land are required to obtain coverage under SWRCB's General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ). The general permit requires that the applicant file a public notice of intent to discharge stormwater and prepare and implement a Stormwater Pollution Prevention Plan (SWPPP). SWPPP must include a site map and a description of the proposed construction activities, demonstrate compliance with relevant local ordinances and regulations, and present a list of Best Management Practices (BMPs) that will be implemented to prevent soil erosion and protect against discharge of sediment and other construction-related pollutants to surface waters. Permittees are further required to monitor construction activities and report compliance to ensure that BMPs are correctly implemented and are effective in controlling the discharge of construction-related pollutants.

Municipal Stormwater Permitting Program

SWRCB regulates stormwater discharges from municipal separate storm sewer systems (MS4s) through its Municipal Storm Water Permitting Program (SWRCB, 2013). Permits are issued under two phases depending on the size of the urbanized area/municipality. Phase I MS4 permits are issued for medium (population between 100,000 and 250,000 people) and large (population of 250,000 or more people) municipalities, and are often issued to a group of co-permittees within a metropolitan area. Phase I permits have been issued since 1990. Beginning in 2003, SWRCB began issuing Phase II MS4 permits for smaller municipalities (population less than 100,000).

El Dorado County is covered under two SWRCB Regional Boards. The West Slope Phase II Municipal Separate Storm Sewer Systems (MS4) NPDES Permit is administered by the Central Valley Regional Water Quality Control Board (RWQCB) (Region Five). The Lake Tahoe Phase I MS4 NPDES Permit is administered by the Lahontan RWQCB (Region Six). The current West Slope MS4 NPDES Permit was adopted by the SWRCB on February 5, 2013. The Permit became effective on July 1, 2013 for a term of five years and focuses on the enhancement of surface water quality within high priority urbanized areas. The current Lake Tahoe MS4 NPDES Permit was adopted and took effect on December 6, 2011 for a term of five years. The Permit incorporated the Lake Tahoe Total Maximum Daily Load (TMDL) and the Lake Clarity Crediting Program (LCCP) to account for the reduction of fine sediment particles and nutrients discharged to Lake Tahoe.

On May 19, 2015 the El Dorado County Board of Supervisors formally adopted revisions to the Storm Water Quality Ordinance (Ordinance 4992). Previously applicable only to the Lake Tahoe Basin, the ordinance establishes legal authority for the entire unincorporated portion of the County. The purpose of the ordinance is to 1) protect health, safety, and general welfare, 2) enhance and protect the quality of Waters of the State by reducing pollutants in storm water discharges to the maximum extent practicable and controlling non-storm water discharges to the storm drain system, and 3) cause the use of Best Management Practices to reduce the adverse effects of polluted runoff discharges on Waters of the State.

#### National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities complying with FEMA regulations that limit development in floodplains. The NFIP regulations permit development within special flood hazard zones provided that residential structures are raised above the base flood elevation of a 100-year flood event. Non-residential structures are required either to provide flood proofing construction techniques for that portion of structures below the 100-year flood elevation or to elevate above the 100-year flood elevation. The regulations also apply to substantial improvements of existing structures.

#### *State Laws, Regulations, and Policies*

##### Porter–Cologne Water Quality Control Act

The Porter–Cologne Water Quality Control Act (known as the Porter–Cologne Act), passed in 1969, dovetails with the CWA (see discussion of the CWA above). It established the SWRCB and divided the state into nine regions, each overseen by an RWQCB. SWRCB is the primary State agency responsible for protecting the quality of the state's surface water and groundwater supplies; however, much of the SWRCB's daily implementation authority is delegated to the nine RWQCBs, which are responsible for implementing CWA Sections 401, 402, and 303[d]. In general, SWRCB manages water rights and regulates statewide water quality, whereas RWQCBs focus on water quality within their respective regions.

The Porter–Cologne Act requires RWQCBs to develop water quality control plans (also known as basin plans) that designate beneficial uses of California's major surface-water bodies and groundwater basins and establish specific narrative and numerical water quality objectives for those waters. Beneficial uses represent the services and qualities of a waterbody (i.e., the reasons that the waterbody is considered valuable). Water quality objectives reflect the standards necessary to protect and support those beneficial uses. Basin plan standards are primarily implemented by regulating waste discharges so that water quality objectives are met. Under the Porter–Cologne Act, basin plans must be updated every 3 years.

**Discussion:** A substantial adverse effect on Hydrology and Water Quality would occur if the implementation of the project would:

- Expose residents to flood hazards by being located within the 100-year floodplain as defined by the Federal Emergency Management Agency;
- Cause substantial change in the rate and amount of surface runoff leaving the project site ultimately causing a substantial change in the amount of water in a stream, river or other waterway;
- Substantially interfere with groundwater recharge;
- Cause degradation of water quality (temperature, dissolved oxygen, turbidity and/or other typical stormwater pollutants) in the project area; or
- Cause degradation of groundwater quality in the vicinity of the project site.

- a. **Water Quality Standards:** Some waste discharge may occur as part of the project. A Preliminary Grading and Drainage Plan was provided and includes water quality features designed to meet treatment standards and requirements. The County Stormwater Coordinator - West Slope reviewed the project and provided comments that are incorporated as conditions of approval. An Erosion and Sediment Control Plan would be required at grading and building plan submittal. Erosion control would be required as part of any future

grading and building permits. Stormwater runoff from development would contain water quality protection features in accordance with a potential National Pollutant Discharge Elimination System (NPDES) stormwater permit, as deemed applicable. The project includes standard conditions of approval to comply with the County Ordinances and standards regarding waste discharge and therefore the project would not be expected to violate any water quality standards. As conditioned, the impacts would be less than significant.

- b. **Groundwater Supplies:** The geology of the Western Slope portion of El Dorado County is principally hard, crystalline, igneous, or metamorphic rock overlain with a thin mantle of sediment or soil. Groundwater in this region is found in fractures, joints, cracks, and fault zones within the bedrock mass. These discrete fracture areas are typically vertical in orientation rather than horizontal as in sedimentary or alluvial aquifers. Recharge is predominantly through rainfall infiltrating into the fractures. Movement of this groundwater is very limited due to the lack of porosity in the bedrock. Wells are typically drilled to depths ranging from 80 to 300 feet in depth. There is no evidence that the project will substantially reduce or alter the quantity of groundwater in the vicinity, or materially interfere with groundwater recharge in the area of the proposed project. The project is not anticipated to affect potential groundwater supplies above pre-project levels. The impacts would be less than significant.
- c. **Drainage Patterns:** A grading permit would be required to address grading, erosion and sediment control for any future construction. Construction activities would be required to adhere to the El Dorado County Grading, Erosion Control and Sediment Ordinance. This includes the use of Best Management Practices (BMPs) to minimize degradation of water quality during construction. Preliminary Grading and Drainage Plans are included with the project (Attachment x), which includes a post-construction drainage plan to ensure the project would not substantially increase the rate or amount of runoff from the site, which could cause flooding or downstream capacity issues. The proposed project would include two (2) vegetative swales constructed to collect and treat storm water runoff from paved surfaces. The two (2) vegetative swales would direct the runoff to the proposed detention basin. With adherence with standard requirements, the impacts on drainage patterns would be less than significant. The impacts would be less than significant.
- d.-e. **Flood-related Hazards:** The project site is not located within any mapped 100-year flood areas and would not result in the construction of any structures that would impede or redirect flood flows (FEMA, 2008). No dams which would result in potential hazards related to dam failures are located in the project area. The risk of exposure to seiche, tsunami, or mudflows would be remote. The impacts would be less than significant.

**FINDING:** The project would be required to address any potential changes to the drainage pattern on-site during the grading and building permit review process. No significant hydrological impacts are expected. The impacts would be less than significant.

XI. LAND USE PLANNING. <i>Would the project:</i>				
	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	

**Regulatory Setting:**

California State law requires that each City and County adopt a general plan "for the physical development of the City and any land outside its boundaries which bears relation to its planning." Typically, a general plan is designed to address the issues facing the City or County for the next 15-20 years. The general plan expresses the community's development goals and incorporates public policies relative to the distribution of future public and private land uses. The El Dorado County General Plan was adopted in 2004. The 2013-2021 Housing Element was adopted in 2013.

**Discussion:** A substantial adverse effect on Land Use would occur if the implementation of the project would:

- Result in the conversion of Prime Farmland as defined by the State Department of Conservation;
  - Result in conversion of land that either contains choice soils or which the County Agricultural Commission has identified as suitable for sustained grazing, provided that such lands were not assigned urban or other nonagricultural use in the Land Use Map;
  - Result in conversion of undeveloped open space to more intensive land uses;
  - Result in a use substantially incompatible with the existing surrounding land uses; or
  - Conflict with adopted environmental plans, policies, and goals of the community.
- a. **Established Community:** The project site is located in the Barnett Business Park in the Shingle Springs Community Region and is surrounded by similar light industrial development to the north, east, and south. The proposed Design Review Permit would not conflict with the existing land use pattern in the area or physically divide an established community. The impacts would be less than significant.
- b. **Land Use Consistency:** The subject parcel has a General Plan land use designation of Industrial (I) and is located in the Industrial Light within a Design Review Community combining zone (IL-DC). The purpose of the Industrial (I) designation is to provide for a full range of light and heavy industrial uses. Types of uses that would be permitted include manufacturing, processing, distribution, and storage. Incompatible, non-industrial uses, excluding support services, shall be discouraged. Industrial lands in Rural Regions may have uses which support agriculture, timber resource production, mineral extraction, or other resource utilization. This designation is considered appropriate within Community Regions, Rural Centers and Rural Regions. The proposed project is consistent with the General Plan land use designation and with the Zone District. The impacts would be less than significant.

**FINDING:** The proposed project would develop eight (8) new office/warehouse buildings and would be consistent with the uses allowed in the Shingle Springs Community Region, with the County General Plan, and with the Zoning Ordinance. The impacts would be less than significant.

<b>XII.MINERAL RESOURCES. <i>Would the project:</i></b>				
	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?				<b>X</b>
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?				<b>X</b>

**Regulatory Setting:**

### **Federal Laws, Regulations, and Policies**

No federal laws, regulations, or policies apply to mineral resources and the Proposed Project.

### **State Laws, Regulations, and Policies**

#### **Surface Mining and Reclamation Act**

The Surface Mining and Reclamation Act of 1975 (SMARA) requires that the State Mining and Geology Board identify, map, and classify aggregate resources throughout California that contain regionally significant mineral resources. Designations of land areas are assigned by CDC and California Geological Survey following analysis of geologic reports and maps, field investigations, and using information about the locations of active sand and gravel mining operations. Local jurisdictions are required to enact planning procedures to guide mineral conservation and extraction at particular sites and to incorporate mineral resource management policies into their general plans.

The California Mineral Land Classification System represents the relationship between knowledge of mineral deposits and their economic characteristics (grade and size). The nomenclature used with the California Mineral Land Classification System is important in communicating mineral potential information in activities such as mineral land classification, and usage of these terms are incorporated into the criteria developed for assigning mineral resource zones. Lands classified MRZ-2 are areas that contain identified mineral resources. Areas classified as MRZ-2a or MRZ-2b (referred to hereafter as MRZ-2) are considered important mineral resource areas.

### **Local Laws, Regulations, and Policies**

El Dorado County in general is considered a mining region capable of producing a wide variety of mineral resources. Metallic mineral deposits, including gold, are considered the most significant extractive mineral resources. Exhibit 5.9-6 shows the MRZ-2 areas within the county based on designated Mineral Resource (-MR) overlay areas. The -MR overlay areas are based on mineral resource mapping published in the mineral land classification reports referenced above. The majority of the county's important mineral resource deposits are concentrated in the western third of the county.

According to General Plan Policy 2.2.2.7, before authorizing any land uses within the -MR overlay zone that will threaten the potential to extract minerals in the affected area, the County shall prepare a statement specifying its reasons for considering approval of the proposed land use and shall provide for public and agency notice of such a statement consistent with the requirements of Public Resources Code section 2762. Furthermore, before finally approving any such proposed land use, the County shall balance the mineral values of the threatened mineral resource area against the economic, social, or other values associated with the proposed alternative land uses. Where the affected minerals are of regional significance, the County shall consider the importance of these minerals to their market region as a whole and not just their importance to the County.

Where the affected minerals are of statewide significance, the County shall consider the importance of these minerals to the State and Nation as a whole. The County may approve the alternative land use if it determines that the benefits of such uses outweigh the potential or certain loss of the affected mineral resources in the affected regional, Statewide, or national market.

**Discussion:** A substantial adverse effect on Mineral Resources would occur if the implementation of the project would:

- Result in obstruction of access to, and extraction of mineral resources classified MRZ-2x, or result in land use compatibility conflicts with mineral extraction operations.
- a.-b. **Mineral Resources.** The project site has not been delineated in the El Dorado County General Plan as a locally important mineral resource recovery site (2003, Exhibits 5.9-6 and 5.9-7). Review of the California Department of Conservation Geologic Map data showed that the project site is not within a mineral resource zone district. There would be no impact.



**FINDING:** For this Mineral Resources category, no impacts to mineral resources are expected, either directly or indirectly. There would be no impacts.

<b>XIII. NOISE.</b> <i>Would the project result in:</i>				
	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 groundborne vibration or groundborne noise levels?			X	
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise level?			X	

**Regulatory Setting:**

No federal or state laws, regulations, or policies for construction-related noise and vibration that apply to the Proposed Project. However, the Federal Transit Administration (FTA) Guidelines for Construction Vibration in Transit Noise and Vibration Impact Assessment state that for evaluating daytime construction noise impacts in outdoor areas, a noise threshold of 90 dBA Leq and 100 dBA Leq should be used for residential and commercial/industrial areas, respectively (FTA 2006).

For construction vibration impacts, the FTA guidelines use an annoyance threshold of 80 VdB for infrequent events (fewer than 30 vibration events per day) and a damage threshold of 0.12 inches per second (in/sec) PPV for buildings susceptible to vibration damage (FTA 2006).

**Discussion:** A substantial adverse effect due to Noise would occur if the implementation of the project would:

- Result in short-term construction noise that creates noise exposures to surrounding noise sensitive land uses in excess of 60dBA CNEL;
- Result in long-term operational noise that creates noise exposures in excess of 60 dBA CNEL at the adjoining property line of a noise sensitive land use and the background noise level is increased by 3dBA, or more; or
- Results in noise levels inconsistent with the performance standards contained in Table 130.37.060.1 and Table 130.37.060.2 of the El Dorado County Zoning Ordinance.

<b>TABLE 6-2 NOISE LEVEL PERFORMANCE PROTECTION STANDARDS FOR NOISE SENSITIVE LAND USES AFFECTED BY NON-TRANSPORTATION* SOURCES</b>						
Noise Level Descriptor	Daytime 7 a.m. - 7 p.m.		Evening 7 p.m. - 10 p.m.		Night 10 p.m. - 7 a.m.	
	Community/ Rural Centers	Rural Regions	Community/ Rural Centers	Rural Regions	Community/ Rural Centers	Rural Regions

Hourly Leq, dB	55	50	50	45	45	40
Maximum level, dB	70	60	60	55	55	50

- a. **Noise Exposures:** The proposed project is not expected to generate noise levels exceeding the performance standards contained within the Zoning Ordinance (Chapter 130.37 Noise Standards) and General Plan (Goal 6.5 Acceptable Noise Levels). Construction noise from the use of trucks and other equipment may result in short-term, temporary noise to surrounding neighbors. These activities would require grading and building permits and would be restricted to construction hours pursuant to the General Plan. Operational noise from future businesses within the proposed office/warehouse buildings are not expected to expose people to noise levels in excess of the established standards. Main access to the project site would be from Business Drive, which is the road opposite to the proposed buildings across from the nearest residences along Shingle Lime Mine Road. Operational noise associated with the proposed uses could include truck loading/unloading areas associated with the warehouses, and equipment with forklifts and backup beepers. The noise is not expected to exceed the performance standards contained in the Zoning Ordinance and General Plan. The project site is located within an established business park, Barnett Business Park, and surrounded by similar commercial and industrial development. Business hours would be typically 7am-7pm which are included as standard conditions of approval. As conditioned, the impacts would be less than significant.
- b. **Ground borne Vibration:** The project site is currently undeveloped. Construction of the proposed project may generate short-term, ground borne vibration or shaking events during project construction; however, this would be temporary. The proposed project does not involve any operations associated with long-term ground borne vibration sources. The impacts would be less than significant.
- c. **Aircraft Noise:** The project site is not located within the vicinity of a private airstrip or an airport land use plan or within two miles of a public airport or public use airport. There would be no impact.

**FINDING:** As conditioned and with adherence to County Code, no significant direct or indirect impacts to noise levels are expected. The impacts would be less than significant.

XIV. POPULATION AND HOUSING. <i>Would the project:</i>				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

**Regulatory Setting:**

No federal or state laws, regulations, or policies apply to population and housing and the proposed project.

**Discussion:** A substantial adverse effect on Population and Housing would occur if the implementation of the project would:

- Create substantial growth or concentration in population;
- Create a more substantial imbalance in the County's current jobs to housing ratio; or
- Conflict with adopted goals and policies set forth in applicable planning documents.

a. **Population Growth:** The project site is currently undeveloped. The proposed project would develop eight (8) new office/warehouse buildings which is a commercial use. The proposed project would have no impact to housing or inducing population growth. There would be no impacts.

b. **Housing Displacement:** The proposed project is a commercial project to develop eight (8) new office/warehouse buildings which would not displace existing housing. There would be no impacts.

**FINDING:** The proposed project would not displace housing and there would be no potential for a significant impact due to substantial growth, either directly or indirectly. For population and housing, there would be no impacts.

<b>XV. PUBLIC SERVICES. <i>Would the project:</i></b>				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a. Fire protection?			X	
b. Police protection?			X	
c. Schools?			X	
d. Parks?			X	
e. Other public services?			X	

**Regulatory Setting:**

***Federal Laws, Regulations, and Policies***

**California Fire Code**

The California Fire Code (Title 24 CCR, Part 9) establishes minimum requirements to safeguard public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings. Chapter 33 of CCR contains requirements for fire safety during construction and demolition.

**Discussion:** A substantial adverse effect on Public Services would occur if the implementation of the project would:

- Substantially increase or expand the demand for fire protection and emergency medical services without increasing staffing and equipment to meet the Department's/District's goal of 1.5 firefighters per 1,000 residents and 2 firefighters per 1,000 residents, respectively;
- Substantially increase or expand the demand for public law enforcement protection without increasing staffing and equipment to maintain the Sheriff's Department goal of one sworn officer per 1,000 residents;
- Substantially increase the public school student population exceeding current school capacity without also including provisions to adequately accommodate the increased demand in services;
- Place a demand for library services in excess of available resources;
- Substantially increase the local population without dedicating a minimum of 5 acres of developed parklands for every 1,000 residents; or
- Be inconsistent with County adopted goals, objectives or policies.

- a. **Fire Protection:** The EDCFPD reviewed the project and provided comments which are incorporated as conditions of approval. The project must adhere to these applicable requirements for emergency vehicle access including roadway widths and turning radii, fire flow and sprinkler requirements, and vehicle ingress/egress. Compliance with these requirements will assure adequate emergency access and evacuation routes. EDCFPD would review future grading and/or building permit applications and would include applicable fire protection measures at that time. The impacts would be less than significant.
- b. **Police Protection:** Police services would be provided by the El Dorado County Sheriff's Department. The proposed project would not significantly increase demand for law enforcement protection. The impacts would be less than significant.
- c. **Schools:** The proposed project to develop eight (8) office/warehouse buildings would be subject to payment of school impact fees at time of grading and building permits issuance, as applicable. The proposed project would not result in an increase in the number of students attending schools in the area. The impacts would be less than significant.
- d. **Parks.** The proposed project to develop eight (8) office/warehouse buildings would not increase the local population, and therefore would not substantially increase the use of parks and recreational facilities. The impacts would be less than significant.
- e. **Other Public Services.** There are no other public services that would be significantly impacted as a result of the proposed project. The impacts would be less than significant.

**FINDING:** The project would not result in a significant increase of public services to the project. Increased demand to services would be addressed through the payment of established impact fees, if applicable. The impacts would be less than significant.

XVI. RECREATION. <i>Would the project:</i>				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact

<b>XVI. RECREATION. <i>Would the project:</i></b>				
	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 substantial physical deterioration of the facility would occur or be accelerated?				<b>X</b>
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?				<b>X</b>

**Regulatory Setting:**

**National Trails System**

The National Trails System Act of 1968 authorized The National Trails System (NTS) in order to provide additional outdoor recreation opportunities and to promote the preservation of access to the outdoor areas and historic resources of the nation. The Appalachian and Pacific Crest National Scenic Trails were the first two components, and the System has grown to include 20 national trails.

The National Trails System includes four classes of trails:

1. National Scenic Trails (NST) provide outdoor recreation and the conservation and enjoyment of significant scenic, historic, natural, or cultural qualities. The Pacific Coast Trail falls under this category. The PCT passes through the Desolation Wilderness area along the western plan area boundary.
2. National Historic Trails (NHT) follow travel routes of national historic significance. The National Park Service has designated two National Historic Trail (NHT) alignments that pass through El Dorado County, the California National Historic Trail and the Pony Express National Historic Trail. The California Historic Trail is a route of approximately 5,700 miles including multiple routes and cutoffs, extending from Independence and Saint Joseph, Missouri, and Council Bluffs, Iowa, to various points in California and Oregon. The Pony Express NHT commemorates the route used to relay mail via horseback from Missouri to California before the advent of the telegraph.
3. National Recreation Trails (NRT) are in, or reasonably accessible to, urban areas on federal, state, or private lands. In El Dorado County there are 5 NRTs.

***State Laws, Regulations, and Policies***

**The California Parklands Act**

The California Parklands Act of 1980 (Public Resources Code Section 5096.141-5096.143) recognizes the public interest for the state to acquire, develop, and restore areas for recreation and to aid local governments to do the same. The California Parklands Act also identifies the necessity of local agencies to exercise vigilance to see that the parks, recreation areas, and recreational facilities they now have are not lost to other uses.

The California state legislature approved the California Recreational Trail Act of 1974 (Public Resources Code Section 2070-5077.8) requiring that the Department of Parks and Recreation prepare a comprehensive plan for California trails. The California Recreational Trails Plan is produced for all California agencies and recreation

providers that manage trails. The Plan includes information on the benefits of trails, how to acquire funding, effective stewardship, and how to encourage cooperation among different trail users.

The 1975 Quimby Act (California Government Code Section 66477) requires residential subdivision developers to help mitigate the impacts of property improvements by requiring them to set aside land, donate conservation easements, or pay fees for park improvements. The Quimby Act gave authority for passage of land dedication ordinances to cities and counties for parkland dedication or in-lieu fees paid to the local jurisdiction. Quimby exactions must be roughly proportional and closely tied (nexus) to a project's impacts as identified through traffic studies required by CEQA. The exactions only apply to the acquisition of new parkland; they do not apply to the physical development of new park facilities or associated operations and maintenance costs.

The County implements the Quimby Act through §16.12.090 of the County Code. The County Code sets standards for the acquisition of land for parks and recreational purposes, or payments of fees in lieu thereof, on any land subdivision. Other projects, such as ministerial residential or commercial development, could contribute to the demand for park and recreation facilities without providing land or funding for such facilities.

### ***Local Laws, Regulations, and Policies***

The 2004 El Dorado County General Plan Parks and Recreation Element establishes goals and policies that address needs for the provision and maintenance of parks and recreation facilities in the county, with a focus on providing recreational opportunities and facilities on a regional scale, securing adequate funding sources, and increasing tourism and recreation-based businesses. The Recreation Element describes the need for 1.5 acres of regional parkland, 1.5 acres of community parkland, and 2 acres of neighborhood parkland per 1,000 residents. Another 95 acres of park land are needed to meet the General Plan guidelines.

**Discussion:** A substantial adverse effect on Recreational Resources would occur if the implementation of the project would:

- Substantially increase the local population without dedicating a minimum of 5 acres of developed parklands for every 1,000 residents; or
- Substantially increase the use of neighborhood or regional parks in the area such that substantial physical deterioration of the facility would occur.

a.-b. **Parks and Recreational Services.** The proposed project is a light industrial project for construction of new office/warehouse buildings within an established Business Park and therefore would not increase the local population such that it would increase the use of existing neighborhood or regional parks causing substantial physical deterioration of those facilities. There would be no impact.

**FINDING:** No significant impacts to parks or recreation facilities would result from the proposed project. The proposed project would not result in the need for the construction or expansion of new recreation facilities. There would be no impact.

XVII. TRANSPORTATION. <i>Would the project:</i>				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact

<b>XVII. TRANSPORTATION.</b> <i>Would the project:</i>				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Conflict with an applicable program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X	
b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) (Vehicle Miles Traveled)?			X	
c. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d. Result in inadequate emergency access?			X	

**Regulatory Setting:**

***Federal Laws, Regulations, and Policies***

No federal laws, regulations, or policies apply to transportation/traffic and the Proposed Project.

***State Laws, Regulations, and Policies***

Caltrans manages the state highway system and ramp interchange intersections. This state agency is also responsible for highway, bridge, and rail transportation planning, construction, and maintenance.

***Local Laws, Regulations, and Policies***

The Transportation and Circulation Element of the County General Plan relies on automobile delay and Level of Service (LOS) as performance measures to determine impacts on County-maintained roads and state highways within the unincorporated areas of the county.

County General Plan Policy TC-Xd states that Level of Service (LOS) for County-maintained roads and state highways within the unincorporated areas of the county shall not be worse than LOS E in the Community Regions or LOS D in the Rural Centers and Rural Regions. Level of Service is calculated using the methodologies in the latest edition of the Highway Capacity Manual (Transportation Research Board, National Research Council). There are some roadway segments that are except from these standards and are allowed to operate at LOS F and are listed in Table TC-2. According to Policy TC-Xe, “worsen” is defined as any of the following number of project trips using a road facility at the time of issuance of a use and occupancy permit for the development project:

- A. A two percent increase in traffic during a.m., p.m. peak hour, or daily
- B. The addition of 100 or more daily trips, or
- C. The addition of 10 or more trips during the a.m. or p.m. peak hour.

Starting on July 1, 2020, automobile delay and level of service (LOS) may no longer be used as the performance measure to determine the transportation impacts of land development under CEQA. Instead, an alternative metric that supports the goals of SB 743 legislation will be required. The use of vehicle miles traveled (VMT) has been recommended by the Governor’s Office of Planning and Research (OPR) and is cited in the CEQA Guidelines as the most appropriate measure of transportation impacts (Section 15064.3(a)).

The intent of SB743 is to bring CEQA transportation analysis into closer alignment with other statewide policies regarding greenhouse gases, complete streets, and smart growth. Using VMT as a performance measure, instead of LOS, is intended to discourage suburban sprawl, reduce greenhouse gas emissions, and encourage the development of smart growth, complete streets, and multimodal transportation networks.

Current direction regarding methods to identify VMT and comply with state requirements is provided by the California Governor's OPR December 2018 publication, Technical Advisory on Evaluating Transportation Impacts in CEQA. This advisory contains technical recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures. OPR provides this Technical Advisory as a resource for the public to use at their discretion. OPR is not enforcing or attempting to enforce any part of the recommendations contained herein. (Government Code Section 65035 ["It is not the intent of the Legislature to vest in the Office of Planning and Research any direct operating or regulatory powers over land use, public works, or other state, regional, or local projects or programs."].)

OPR's Technical Advisory provides this direction for small projects:

Many local agencies have developed screening thresholds to indicate when detailed analysis is needed. Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact.

Per OPR's Technical Advisory, this determination is based on the following:

CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. (CEQA Guidelines, § 15301, subd. (e)(2)). Typical project types for which trip generation increases relatively linearly with building footprint (i.e., general office building, single tenant office building, office park, and business park) generate or attract an additional 110-124 trips per 10,000 square feet. Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 110 or fewer trips could be considered not to lead to a significant impact.

On October 6, 2020, El Dorado County Board of Supervisors adopted Resolution 141-2020 setting thresholds of significance for VMT resulting from proposed development projects. The County's screening threshold for small projects is less than 100 trips per day, as opposed to the OPR's 110 trips per day. The VMT threshold for a residential and office land use is 15% below the baseline County-wide VMT, and no net increase for retail projects.

**Discussion:** A substantial adverse effect on Transportation would occur if the implementation of the project would:

- Conflict with an applicable program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities;
- Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) (Vehicle Miles Traveled); or
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- Result in inadequate emergency access.

- a. **Conflicts with a Transportation Plan, Policy or Ordinance:** The County DOT reviewed the project and provided comments. Based on the review of the initial Transportation Impact Study Initial Determination Form (TIS ID), and based on square footage of the proposed office/warehouses, the trip generation estimates would exceed the limits of Policy TC-Xe (El Dorado County General Plan) in the addition of 100 or more daily trips or the addition of ten (10) or more trips during the a.m. peak hour or the p.m. peak hour; therefore, a traffic study was required. A Traffic Impact Assessment (TIA) was prepared by FSI Traffic Engineering, with final report dated September 8, 2023 (Attachment 11). The TIA was reviewed by County DOT and peer reviewed by DKS Associates. As stated in the DKS memorandum dated September 26, 2023, the TIA was reviewed for content and compliance, sufficiently addressed all comments, and it was



determined that the addition of project traffic would result in acceptable LOS per General Plan Policy TC-Xd. Access to the project site would be from Business Drive. Construction of an extension of Business Drive from its existing northerly terminus to just beyond the proposed driveway's northern curb return is required. There is an existing 60-foot road and public utilities easement and Right of Way (ROW) along Business Drive that would allow for future improvement to the County-maintained roadways to serve future development to the north, and to meet and maintain General Plan policy level of service standards. The proposed project would not conflict with transit, bicycle and pedestrian facilities as there are no such facilities in the vicinity of the project site. With implementation of standard and project-specific conditions of approval, any potential impacts would be less than significant.

- b. **Vehicle Miles Travelled (VMT):** Per Resolution 141-2020 adopted October 6, 2020, by the County of El Dorado Board of Supervisors for VMT Thresholds of Significance for purposes of analyzing transportation impacts under CEQA, there is a presumption of less than significant impacts for projects that generate or attract less than 100 trips per day. Construction activities associated with the project would temporarily generate additional vehicle traffic in the project area and would not be expected to exceed 100 trips per day during the construction period. However once construction has been completed, long-term traffic is anticipated to increase by 243 trips daily. A Traffic Impact Assessment (TIA) was required and prepared by FSI Traffic Engineering, with a final report dated September 8, 2023. The TIA was reviewed by County DOT and peer reviewed by DKS Associates and sufficiently addressed all comments. In accordance with Resolution 141-2020, with OPRs direction regarding determining transportation impacts for land use projects, and based on the summary of the TIA, impacts to VMT would be considered less than significant.
- c. **Design Hazards:** The proposed project was reviewed by County DOT and project-specific and standard conditions of approval would be incorporated into the project. Site access would be from Business Drive and requires design and pave for project encroachment consistent with County Standard Plan 103G to the satisfaction of DOT. No sharp curves or dangerous intersections exist on the subject parcel or in the vicinity of the project site and would not be introduced as part of the proposed project. The impacts would be less than significant.
- d. **Emergency Access:** Fire Safe Regulations state that on-site roadways shall "provide for safe access for emergency wildland fire equipment and civilian evacuation concurrently and shall provide unobstructed traffic circulation during wildlife emergency". As shown on the site plans (Attachment 7), the project would accommodate the required fire safe access to allow for adequate access and on-site circulation for emergency vehicles. Any potential impacts would be less than significant.

**FINDING:** The project would not conflict with applicable General Plan policies regarding effective operation of the County circulation system and the project would not exceed the LOS thresholds for traffic identified within the General Plan. Further, the project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b) (Vehicle Miles Traveled). The project would not create any road hazards or affect road safety and would not result in inadequate emergency access. For this Transportation category, the threshold of significance would not be exceeded, and impacts would be less than significant.

<b>XVIII. TRIBAL CULTURAL RESOURCES.</b> <i>Would the project: Cause a substantial adverse change in the significance of a Tribal Cultural Resource as defined in 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:</i>	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), or			X	

<b>XVIII. TRIBAL CULTURAL RESOURCES.</b> <i>Would the project: Cause a substantial adverse change in the significance of a Tribal Cultural Resource as defined in 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:</i>	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.			<b>X</b>	

**Regulatory Setting:**

***Federal Laws, Regulations, and Policies***

No federal laws, regulations, or policies apply to Tribal Cultural Resources (TCRs) and the Proposed Project.

***State Laws, Regulations, and Policies***

**Assembly Bill (AB) 52**

AB 52, which was approved in September 2014 and effective on July 1, 2015, requires that CEQA lead agencies consult with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of a proposed project, if so requested by the tribe. The bill, chaptered in CEQA Section 21084.2, also specifies that a project with an effect that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment.

Defined in Section 21074(a) of the Public Resources Code, TCRs are:

1. Sites, features, places, cultural landscapes, sacred places and objects with cultural value to a California Native American tribe that are either of the following:
  - Included or determined to be eligible for inclusion in the California Register of Historical Resources;
  - Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
2. 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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

TCRs are further defined under Section 21074 as follows:

- A cultural landscape that meets the criteria of subdivision (a) is a TCR to the extent that the landscape is geographically defined in terms of the size and scope of the landscape; and
- A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a “nonunique archaeological resource” as defined in subdivision (h) of Section 21083.2 may also be a TCR if it conforms with the criteria of subdivision (a).

Mitigation measures for TCRs must be developed in consultation with the affected California Native American tribe pursuant to newly chaptered Section 21080.3.2, or according to Section 21084.3. Section 21084.3 identifies mitigation measures that include avoidance and preservation of TCRs and treating TRCs with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource.

**Discussion:**

In general, significant impacts are those that diminish the integrity, research potential, or other characteristics that make a TCR significant or important. To be considered a TCR, a resource must be either: (1) listed, or determined to be eligible for listing, on the national, state, or local register of historic resources, or: (2) a resource that the lead agency chooses, in its discretion, to treat as a TCR and meets the criteria for listing in the state register of historic resources pursuant to the criteria set forth in Public Resources Code Section 5024.1(c). A substantial adverse change to a TCR would occur if the implementation of the project would:

- Disrupt, alter, or adversely affect a TCR such that the significance of the resource would be materially impaired.

UAIC conducted a background search for identification of TCRs for this project, which included review of pertinent literature, historic maps, and a records search using UAIC's Tribal Historic Information System (THRIS). UAIC's THRIS database is composed of UAIC's areas of oral history, ethnographic history, and places of cultural and religious significance, including UAIC's Sacred Lands that are submitted to the Native American Heritage Commission (NAHC). The THRIS resources shown in this region also include previously recorded indigenous resources identified through the CHRIS Center as well as historic resources and survey data.

UAIC is a federally recognized Tribe comprised of both Miwok and Maidu (Nisenan) Tribal members who are traditionally and culturally affiliated with the project area. The Tribe has deep spiritual, cultural, and physical ties to their ancestral land and are contemporary stewards of their culture and landscapes. The Tribal community represents a continuity and endurance of their ancestors by maintaining their connection to their history and culture. It is the Tribe's goal to ensure the preservation and continuance of their cultural heritage for current and future generations.

- a.-b. **Tribal Cultural Resources:** A Cultural Resource record search was conducted at the North Central Information Center (NCIC) of the CHRIS on October 28, 2019. A Cultural Resource Study was prepared by Historic Resource Associates with report dated October 2019. The field investigation indicated that no significant indigenous or historic archaeological sites, features, or artifacts were found, nor any significant historic buildings, structures, or objects discovered, and no further cultural resource work was recommended. In the event of human remains discovery during any future construction if additional structures are built, standard conditions of approval to address accidental discovery of human remains would apply during any grading activities. The project is subject to the cultural resources provisions of CEQA AB52, which requires Native American outreach. Pursuant to AB52, the County solicited input from Native American organizations and representatives listed with the Native American Heritage Commission to identify cultural resources and properties of concern to the Native American Community. At the time of the initial review consultation, seven tribes were notified of the proposed project: Ione Band of Miwok Indians, Nashville-El Dorado Miwok, Shingle Springs Band of Miwok Indians, Tsi Akim Maidu, UAIC, Washoe Tribe of Nevada and California, and Wilton Rancheria. The Tribes were notified of the proposed project by certified mail on November 28, 2022. The Shingle Springs Band of Miwok Indians and UAIC responded within 30 days to initiate consultation. Staff provided the tribes with the cultural resources record search results and Cultural Resources Study for their review. Staff confirmed conclusion of consultation via email on June 30, 2023. Standard protective conditions of approval will be incorporated with the project. The impacts would be less than significant.

**FINDING:** Standard conditions of approval would apply in the event of discovery of any Tribal Cultural Resources (TCRs) during any future construction, that construction would stop immediately, and the Tribes would be notified. Therefore, the proposed project as conditioned would have a less than significant impact on Tribal Cultural Resources.

<b>XIX. UTILITIES AND SERVICE SYSTEMS. <i>Would the project:</i></b>				
	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 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 or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			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 statutes and regulations related to solid waste?			X	

**Regulatory Setting:**

***Federal Laws, Regulations, and Policies***

**Energy Policy Act of 2005**

The Energy Policy Act of 2005, intended to reduce reliance on fossil fuels, provides loan guarantees or tax credits for entities that develop or use fuel-efficient and/or energy efficient technologies (USEPA, 2014). The act also increases the amount of biofuel that must be mixed with gasoline sold in the United States (USEPA, 2014).

***State Laws, Regulations, and Policies***

**California Integrated Waste Management Act of 1989**

The California Integrated Waste Management Act of 1989 (Public Resources Code, Division 30) requires all California cities and counties to implement programs to reduce, recycle, and compost wastes by at least 50 percent by 2000 (Public Resources Code Section 41780). The state, acting through the California Integrated Waste Management Board (CIWMB), determines compliance with this mandate. Per-capita disposal rates are used to determine whether a jurisdiction's efforts are meeting the intent of the act.

**California Solid Waste Reuse and Recycling Access Act of 1991**

The California Solid Waste Reuse and Recycling Access Act of 1991 (Public Resources Code Sections 42900-42911) requires that all development projects applying for building permits include adequate, accessible areas for collecting and loading recyclable materials.

**California Integrated Energy Policy**

Senate Bill 1389, passed in 2002, requires the California Energy Commission (CEC) to prepare an Integrated Energy Policy Report for the governor and legislature every 2 years (CEC 2015a). The report analyzes data and provides policy recommendations on trends and issues concerning electricity and natural gas, transportation, energy efficiency, renewable energy, and public interest energy research (CEC 2015a). The 2014 Draft Integrated Energy Policy Report Update includes policy recommendations, such as increasing investments in electric vehicle charging infrastructure at workplaces, multi-unit dwellings, and public sites (CEC 2015b).

#### Title 24 Building Energy Efficiency Standards

Title 24 Building Energy Efficiency Standards of the California Building Code are intended to ensure that building construction, system design, and installation achieve energy efficiency and preserve outdoor and indoor environmental quality (CEC 2012). Title 24 California Building Standards Code is revised on a regular basis with the most current edition 2024, and each revision increasing the required level of energy efficiency.

#### Urban Water Management Planning Act

California Water Code Sections 10610 *et seq.* requires that all public water systems providing water for municipal purposes to more than 3,000 customers, or supplying more than 3,000 acre-feet per year (AFY), prepare an urban water management plan (UWMP).

#### *Other Standards and Guidelines*

#### Leadership in Energy & Environmental Design

Leadership in Energy & Environmental Design (LEED) is a green building certification program, operated by the U.S. Green Building Council (USGBC) that recognizes energy efficient and/or environmentally friendly (green) components of building design (USGBC, 2015). To receive LEED certification, a building project must satisfy prerequisites and earn points related to different aspects of green building and environmental design (USGBC, 2015). The four levels of LEED certification are related to the number of points a project earns: (1) certified (40–49 points), (2) silver (50–59 points), (3) gold (60–79 points), and (4) platinum (80+ points) (USGBC, 2015). Points or credits may be obtained for various criteria, such as indoor and outdoor water use reduction, and construction and demolition (C&D) waste management planning. Indoor water use reduction entails reducing consumption of building fixtures and fittings by at least 20% from the calculated baseline and requires all newly installed toilets, urinals, private lavatory faucets, and showerheads that are eligible for labeling to be WaterSense labeled (USGBC, 2014). Outdoor water use reduction may be achieved by showing that the landscape does not require a permanent irrigation system beyond a maximum 2.0-year establishment period, or by reducing the project's landscape water requirement by at least 30% from the calculated baseline for the site's peak watering month (USGBC, 2014). C&D waste management points may be obtained by diverting at least 50% of C&D material and three material streams, or generating less than 2.5 pounds of construction waste per square foot of the building's floor area (USGBC, 2014).

**Discussion:** A substantial adverse effect on Utilities and Service Systems would occur if the implementation of the project would:

- Breach published national, state, or local standards relating to solid waste or litter control;
- Substantially increase the demand for potable water in excess of available supplies or distribution capacity without also including provisions to adequately accommodate the increased demand, or is unable to provide an adequate on-site water supply, including treatment, storage and distribution;
- Substantially increase the demand for the public collection, treatment, and disposal of wastewater without also including provisions to adequately accommodate the increased demand, or is unable to provide for adequate on-site wastewater system; or
- Result in demand for expansion of power or telecommunications service facilities without also including provisions to adequately accommodate the increased or expanded demand.

- a. **New Stormwater Facilities or Construction of New Facilities:** Any stormwater drainage facilities needed for any future construction would be built in conformance with the County of El Dorado Drainage Manual and would be reviewed during the grading and building permit processes.

The project water source for both potable water and emergency fire protection would be by connecting to existing public water service provided by EID. Based on the FIL dated March 4, 2022, a 10-inch water line is currently under construction in Business Drive. The El Dorado County Fire Protection District determined that the minimum fire flow for the proposed project would be 1,500 GPM for a 2-hour duration while maintaining a 20-psi residual pressure. This system would be able to deliver the required fire flow. To receive service, construction of a water line extension to connect to the 10-inch water line would be required and would be located near the southern boundary of the project site. (Attachment 10).

The project sewer source would be by connecting to existing public sewer service provided by EID. Based on the FIL, there is a 4-inch sewer force main currently under construction in Business Drive that would be located near the southern boundary of the project site. This sewer line and the downstream sewer system has adequate capacity at this time. In order to receive service from this line, an extension of facilities of adequate size must be constructed. A new private full sewage lift station would be required to serve the proposed project. Construction of the sewer lift station is not expected to cause any significant environmental effects. As of date, the project would require 1 EDU of sewer service. (Attachment 10).

Electric service would be provided by connecting to existing PG&E infrastructure in the immediate project vicinity.

With the incorporation of conditions of approval, the impacts would be less than significant.

- b. **Sufficient Water Supply:** The project water source for both potable water and emergency fire protection would be by connecting to existing public water service provided by EID. Based on the Facilities Improvement Letter (FIL) dated March 4, 2022, a 10-inch water line is currently under construction in Business Drive. The El Dorado County Fire Protection District determined that the minimum fire flow for the proposed project would be 1,500 GPM for a 2-hour duration while maintaining a 20-psi residual pressure. This system would be able to deliver the required fire flow. To receive service, construction of a water line extension to connect to the 10-inch water line would be required and would be located near the southern boundary of the project site. The project's water demand can be met by the existing water supply. With incorporation of conditions of approval, the impacts would be less than significant.
- c. **Adequate Wastewater Capacity:** The project would be provided sewer service by connecting to existing EID infrastructure in the vicinity. Based on the FIL, there is a 4-inch sewer force main currently under construction in Business Drive that would be located near the southern boundary of the project site. This sewer line and the downstream sewer system has adequate capacity at this time. In order to receive service from this line, an extension of facilities of adequate size must be constructed. A new private full sewage lift station would be required to serve the proposed project. As of date, the project would require 1 EDU of sewer service. With the incorporation of conditions of approval, the impact would be less than significant.
- d.-e. **Solid Waste Disposal and Requirements:** El Dorado Disposal distributes municipal solid waste to Forward Landfill in Stockton and Kiefer Landfill in Sacramento. Pursuant to El Dorado County Environmental Management Solid Waste Division staff, both facilities have sufficient capacity to serve the County. Recyclable materials are distributed to a facility in Benicia and green wastes are sent to a processing facility in Sacramento. County Ordinance No. 4319 requires that new development provide areas for adequate, accessible, and convenient storing, collecting and loading of solid waste and recyclables. This project does not propose to add any activities that would generate substantial additional solid waste, as light industrial uses would generate minimal amounts of solid waste for disposal. The impact would be less than significant.

**FINDING:** For the Utilities and Service Systems category, no significant utility and service system impacts would be expected from the project, either directly or indirectly. The impacts would be less than significant.

<b>XX. WILDFIRE.</b> <i>If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:</i>				
	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	

**Discussion:**

- a. The project is located in the Barnett Business Park and surrounded by existing light industrial and commercial uses to the north, east, and south and residential uses to the west in a subdivision on the other side of Shingle Lime Mine Road. The proposed project would not alter any roadways, access points, or otherwise degrade traffic operations and access to the area in such a way as to interfere with an emergency response or evacuation plan. The proposed project would not notably increase the risk of wildfire. A Wildland Urban Interface Fire Protection Plan was prepared by CDS Fire Prevention Planning, Registered Professional Forester, William F. Draper (Attachment 17). With incorporation of the approved Wildland Urban Interface Fire Protection Plan, and conditions of approval from local Fire District, potential impacts would be less than significant.
- b. Implementation of the proposed project would not expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. The project is required to adhere to all fire prevention and protection requirements and regulations of El Dorado County including the El Dorado County Fire Hazard Ordinance and the Uniform Fire Code, as applicable. Pertinent measures include, but are not limited to, the use of equipment with spark arrestors and non-sparking tools during project activities. The project applicant would also be required to develop the project structures to meet 'defensible space' requirements as specified under Objective 6.2.1 of the Safety Element of the El Dorado County General Plan. Any potential impacts would be less than significant.
- c. Development of the project site for eight (8) new office/warehouse buildings would include connecting to existing public water and sewer infrastructure as detailed in the FIL from EID, as well as connecting to existing PG&E infrastructure in the immediate project vicinity for electric service. The project site is surrounded by similar development and any new connections would not require major infrastructure development that would exacerbate fire risk or result in temporary or ongoing impacts to the environment. Any potential impacts would be less than significant.

- d. The proposed project has been reviewed by the EDCFPD and is not anticipated to exacerbate wildfire risks. The project area does not have steep or sloping terrain that would expose people or structures to significant risk from downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes. Further, a Wildland Urban Interface Fire Protection Plan was prepared by CDS Fire Prevention Planning, Registered Professional Forester, William F. Draper. With implementation of conditions of approval and adherence to the approved Wildland Urban Interface Protection Plan, any potential impacts would be less than significant.

**FINDING:** As conditioned and with adherence to El Dorado County Code of Ordinances, and approved Wildland Urban Interface Fire Protection Plan, for this Wildfire category, any potential impacts would be less than significant.



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

### Discussion

- a. No substantial evidence contained in the project record has been found that would indicate that this project would have the potential to significantly degrade the quality of the environment. As conditioned or mitigated, and with adherence to County permit requirements, this project would not have the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of California history or pre-history. Any impacts from the project would be less than significant due to the design of the project and required standards that would be implemented during the grading and building permit processes and/or any required project specific improvements on the property.
- b. Cumulative impacts are defined in Section 15355 of the California Environmental Quality Act (CEQA) Guidelines as *two or more individual effects, which when considered together, would be considerable or which would compound or increase other environmental impacts.*

The proposed project and site-specific environmental conditions of approval, which have been disclosed in the Project Description and analyzed in Items I through XXI, show there would be no significant impacts anticipated related to aesthetics, agriculture/forest resources, air quality, biological resources, cultural resources, geology/soils, greenhouse gas emissions, hazards/hazardous materials, hydrology/water quality, land use planning, mineral resources, noise, population/housing, public services, recreation, traffic/transportation, tribal cultural resources, or utilities/service systems that would combine with similar effects such that the project's contribution would be cumulatively considerable. For all categories (except biological resources which incorporated mitigation measures MM BIO-1 and MM BIO-2), a determination of either less than significant impacts or no impacts would be anticipated.

As outlined and discussed in this document, as conditioned and with compliance with County Codes, this project would be anticipated to have a less than significant project-related environmental effect which would cause substantial adverse effects on human beings, either directly or indirectly. Based on the analysis in this study, it has been determined that the project would have less than significant cumulative impacts.

- c. Based on the discussion contained in this document, no potentially significant impacts to human beings are anticipated to occur with respect to potential project impacts. Development of the site would require review and permitting through the County. Adherence to these standard conditions of approval would be expected to reduce potential impacts to a less than significant level.

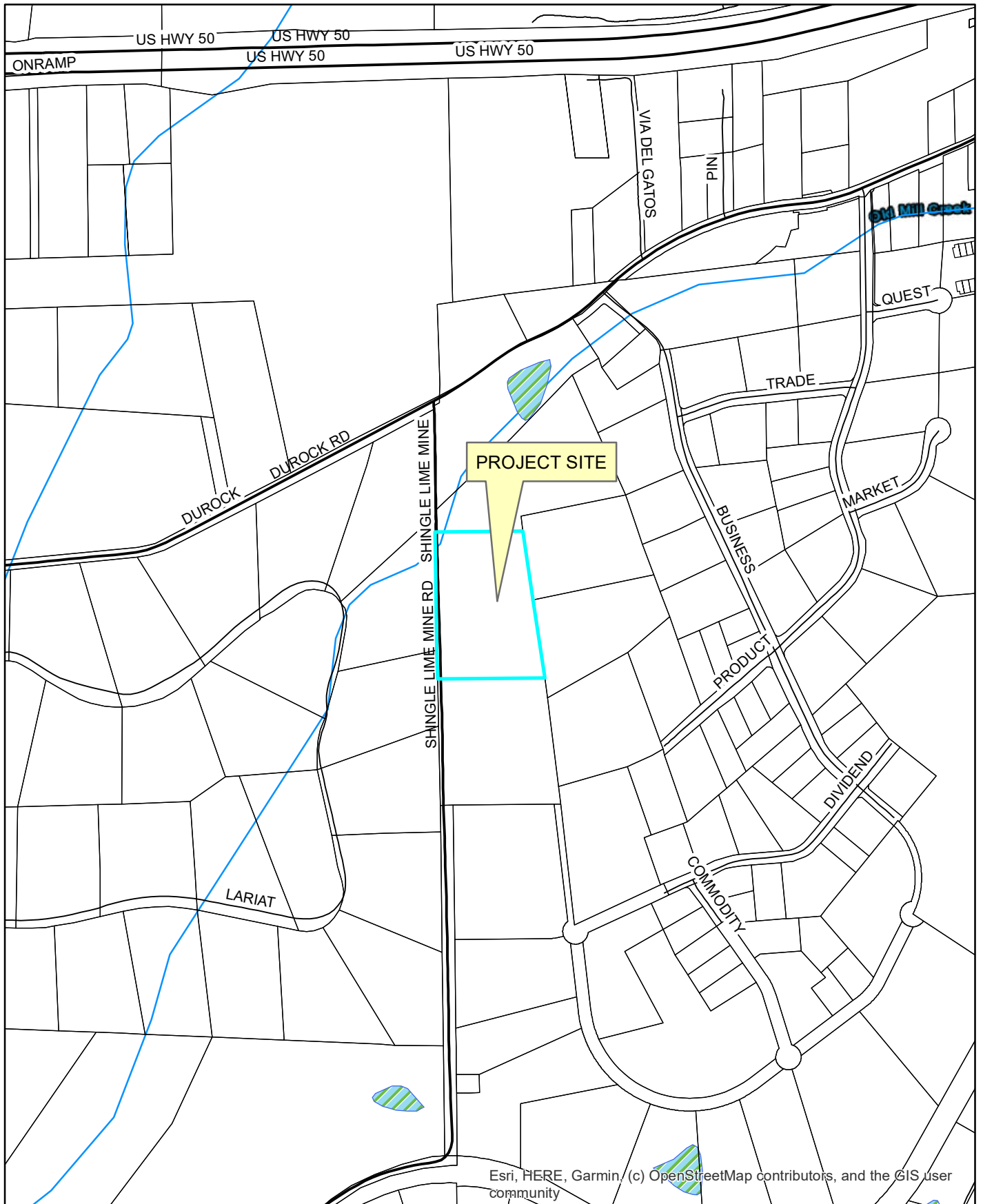
**FINDINGS:** It has been determined that the proposed project would not result in significant environmental impacts. The project would not exceed applicable environmental standards, nor significantly contribute to cumulative environmental impacts.

### **SUPPORTING INFORMATION SOURCE LIST**

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DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 1 - LOCATION MAP



0 0.0350.07 0.14 0.21 0.28 Miles

Scale

N



Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community



DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 2 - AERIAL MAP



0 0.0350.07 0.14 0.21 0.28 Miles

Scale





DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 3 - ASSESSORS PARCEL PAGE

POR. SECS. 2 & 11, T.9N., R.9E., M.D.M.

109:24



THIS MAP IS NOT A SURVEY. It is prepared by the El Dorado Co. Assessor's office for assessment purposes only. Area calculations and characteristics are not guaranteed. Users should verify items such as dimensions and acreage. Map drafted 6/15/22.

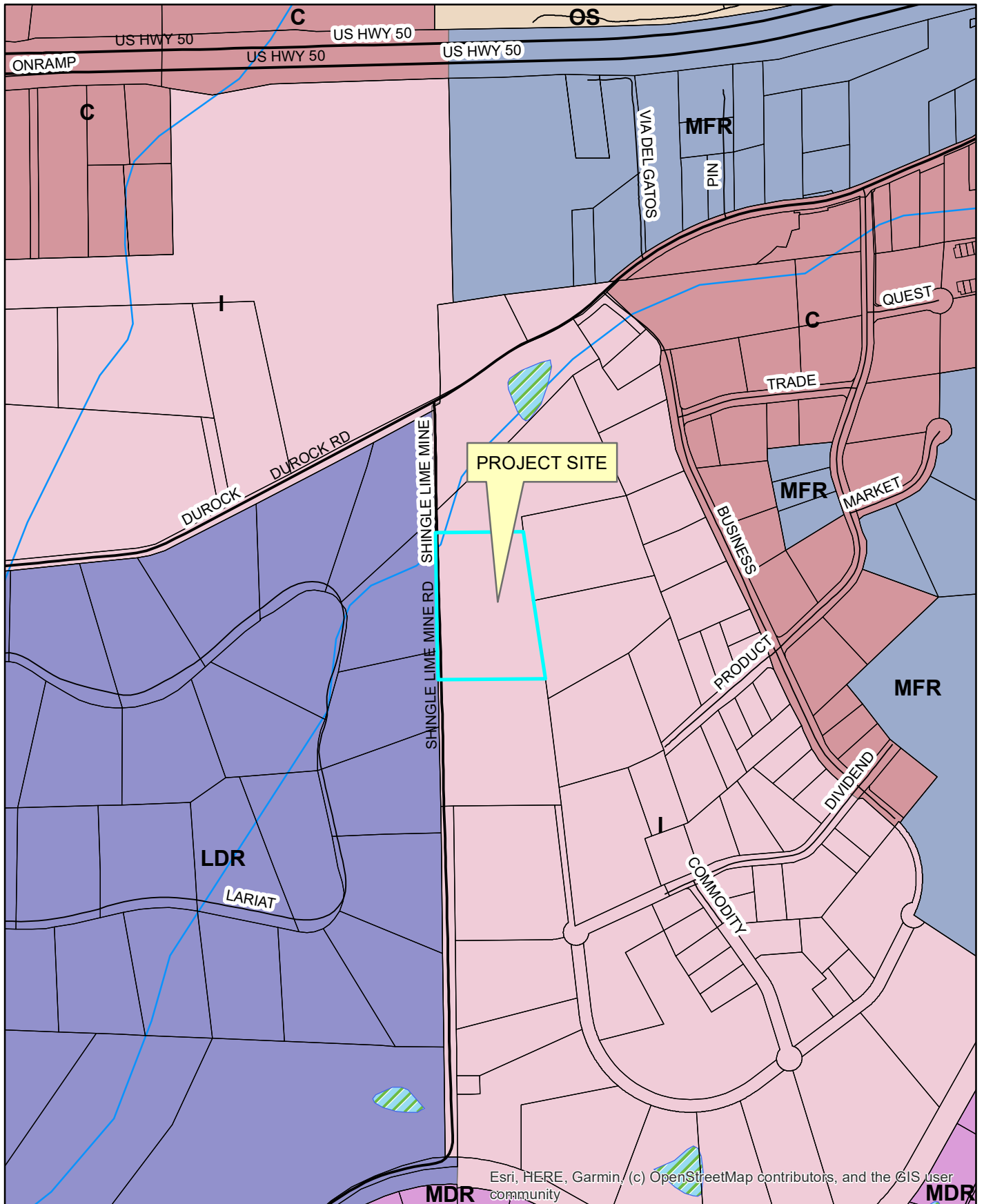
Acreages Are Estimates

Adjacent Map Pages Shown in Grey Text  
Assessor's Block Numbers Shown in Ellipses  
Assessor's Parcel Numbers Shown in Circles

Rev. November 19, 2021

Assessor's Map Bk. 109, Pg. 24  
County of El Dorado, CA

DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 4 - GENERAL PLAN LAND USE MAP



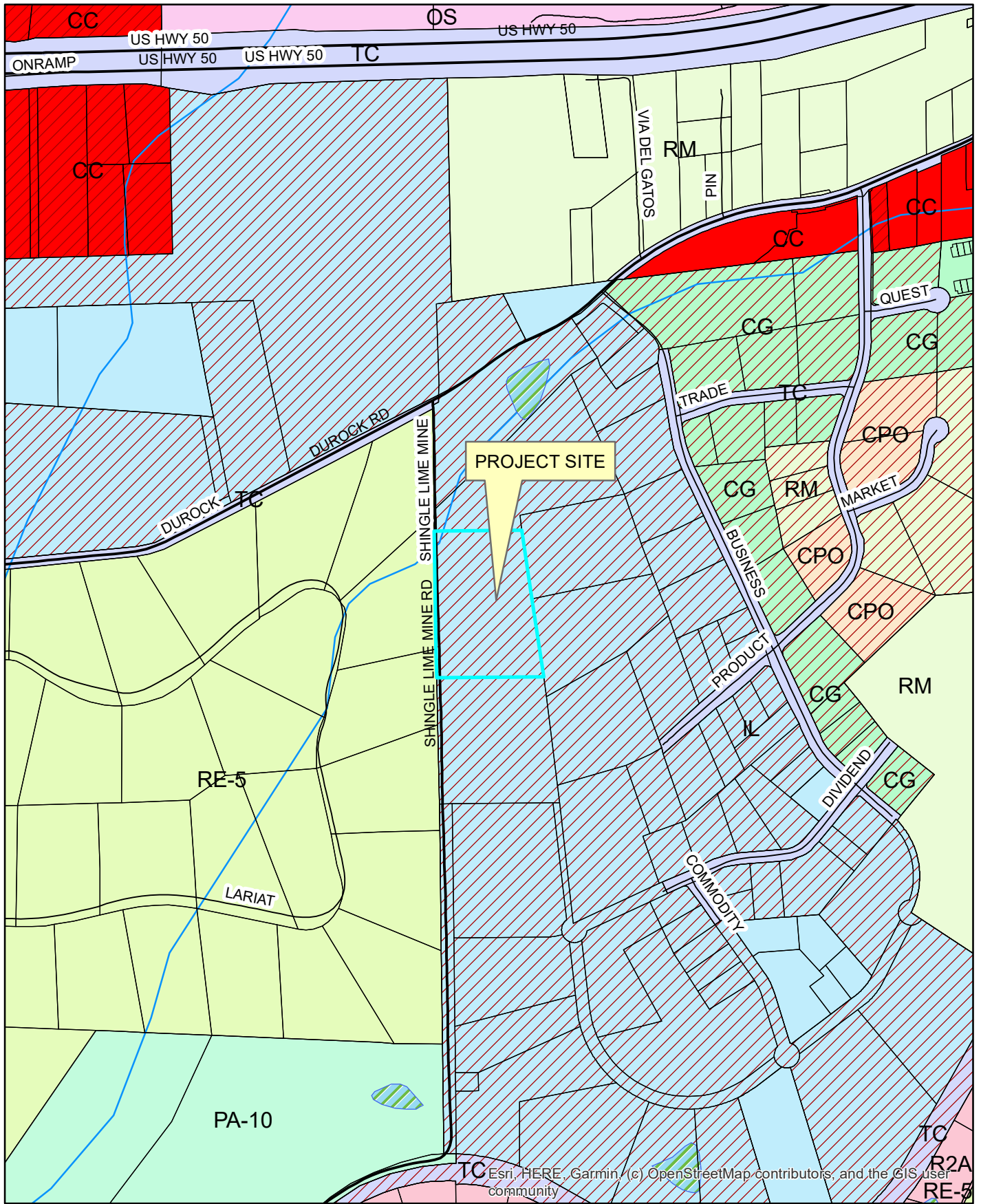
0 0.0350.07 0.14 0.21 0.28 Miles

Scale





DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 5 - ZONING MAP

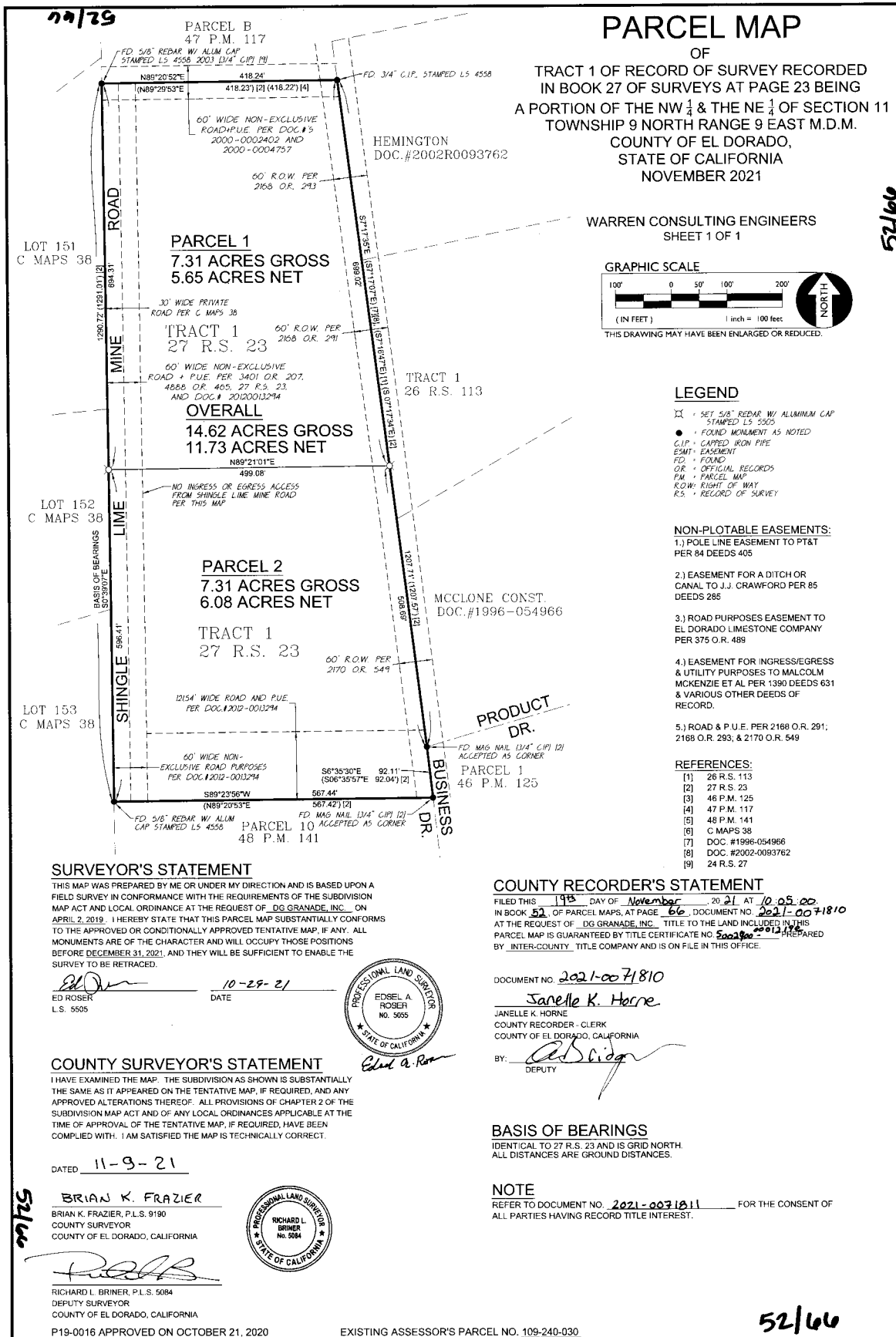


0 0.0350.07 0.14 0.21 0.28 Miles

Scale



DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 6 - PARCEL MAP 52/66/1



109-240-036  
JEREMIAH J. CURTIS  
LEAH B. CURTIS

109-240-011  
MARK E. HEMINGTON  
JILL L. HEMINGTON

THE KEYNOTES SHOWN HERE ARE TYPICAL FOR ALL BUILDINGS

BUSINESS DRIVE

30'-0"

12'-0"

40'-0"

120'-0"

40'-0"

120'-0"

40'-0"

120'-0"

40'-0"

120'-0"

75'-0"

18'-0"

27'-0"

18'-0"

12'-0"

27'-0"

32'-0"

5 STALLS @ 9' E.A.

5 STALLS @ 9' E.A.

BUILDING 5  
8,959 S.F.

BUILDING 6  
8,959 S.F.

BUILDING 7  
8,959 S.F.

BUILDING 8  
8,959 S.F.

BUILDING 1  
8,959 S.F.

BUILDING 2  
8,959 S.F.

BUILDING 3  
8,959 S.F.

BUILDING 4  
8,959 S.F.

109-240-033  
BARBOTTI FAMILY JUICE CO.

109-240-036  
JEREMIAH J. CURTIS  
LEAH B. CURTIS

SHINGLE LIME MINE ROAD

109-171-010  
EDWARD R. O'NEILL  
MICHELLE R. O'NEILL

109-171-011  
KAREN MARIE JIMENEZ  
SUCCESSOR TRUSTEE

KEYNOTE LEGEND

1 6" HIGH CONCRETE MASONRY TRASH ENCL. WITH STEEL GATES

2 6" HIGH CONCRETE CURB - SEE CIVIL DRAWING

3 A.C. PAVING at DRIVEWAY and PARKING AREA

4 TRUCK LOADING AREA

5 SECURITY FENCING - CHAIN LINK WITH VINYL SLATS

6 12' WIDE VEHICULAR GATES TO MATCH FENCING

7 LANDSCAPED AREA - SEE LANDSCAPE DRAWING

8 PARKING STALL - TYP. WHERE SHOWN

9 PROPANE TANK

10 CONCRETE SIDEWALK

11 ACCESSIBLE PARKING LOADING AREA

12 EASEMENT - SEE CIVIL DRAWINGS

13 STAFF PARKING SPACES IN BUILDING YARD

14 GRAVEL BUILDING YARD

15 AC PAVED ENTRY DRIVE

16 20' WIDE FIRE ACCESS LAKE

1" = 30'-0"

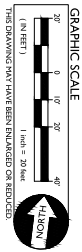
1 SITE PLAN

A-1

# DR22-0009 DG GRANADE BUSINESS PROPERTIES, LLC OFFICE/WAREHOUSE BUILDINGS ATTACHMENT 7 - SITE PLANS



MATCH LINE - SEE SHEET C2.2



FILENAME: VZ-024.DWG VZ-024-C21-C22.DWG

- GRADING NOTES
1. GRADE CONTINUED TO NEXT AND/OR SHEET.

SHEET NO. <b>C2.1</b>	DESIGNED: AT	NO. REVISIONS AT	HORIZONTAL SCALE: AS NOTED VERTICAL SCALE: N/A JOB NO.: 22-024		EXHIBIT TITLE: GRADING PLAN PROJECT: GRANADE BUSINESS PROPERTIES LLC IMPROVEMENT PLANS AH- BUSINESS DRIVE SHINGLE SPRINGS, CA 95662	A.P.N.: BENCHMARK 165-002 ELEV. 1320.25 REMARK: W/ CAP STAMPED "DO NOT DAM-2" FROM US-95, EXIT SOUTH ON CAMERON PARK DR. IN CAMERON PARK, TRAVEL 0.2 MI ON CAMERON PARK DR., DUKOOK RD. TO ROBIN LN. POINT IS 30'-S SOUTH FROM AHI LOCATED ON SE CORNER OF DUKOOK RD. (CAMERON PARK DR. L) AND ROBIN LN., 17' FROM BACK OF SIDEWALK OF DUKOOK RD.
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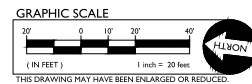
# ATTACHMENT 7 - SITE PLANS

MATCH LINE - SEE SHEET C2.1



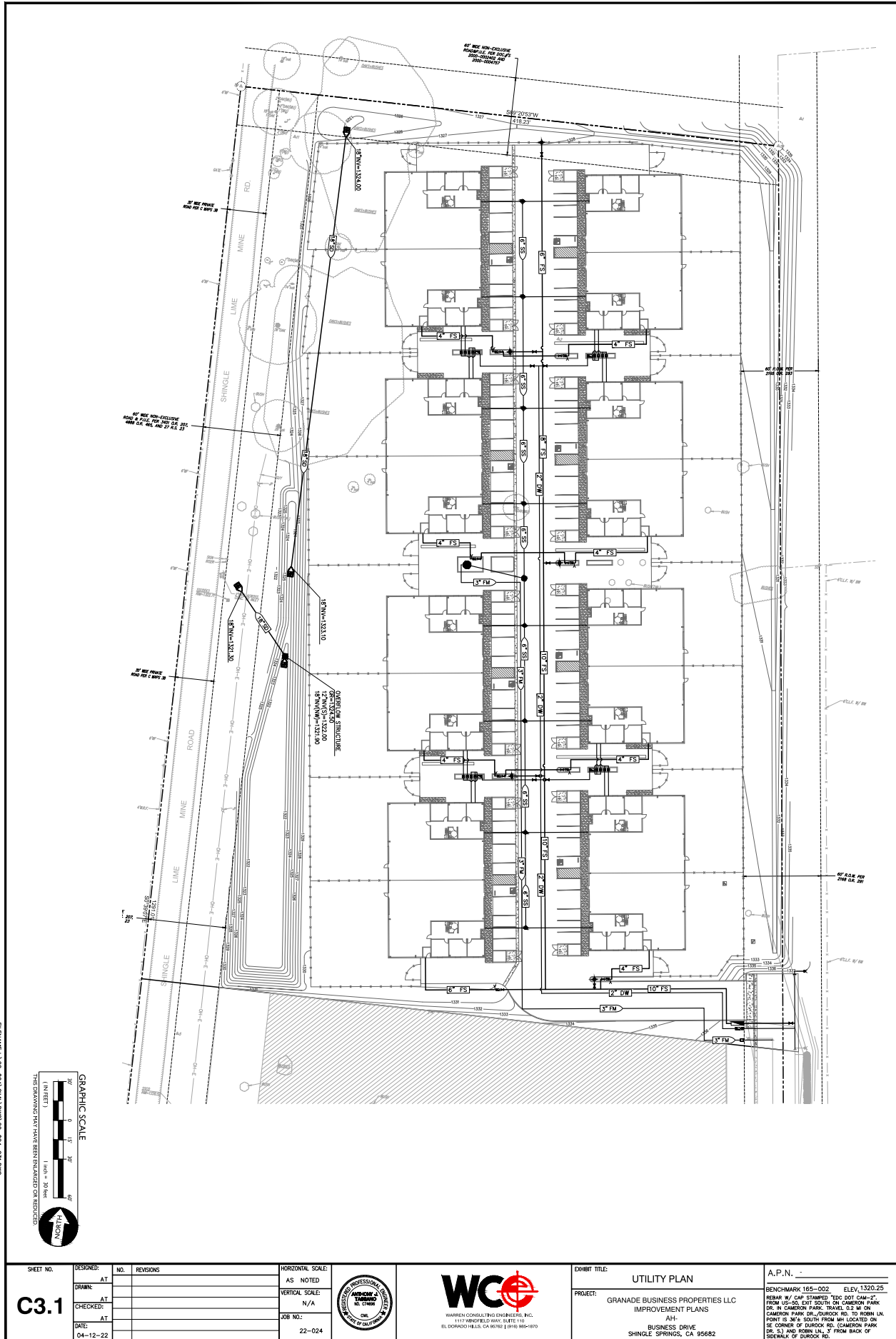
GRADING NOTES

1. GRADE UNIFORMLY TO INLET AND/OR SWALE.

[illegible]

FILENAME:I:\22-024\CIVIL\DWG\22-024-C21-C22.DWG

# DR22-0009 DG GRANADE BUSINESS PROPERTIES, LLC OFFICE/WAREHOUSE BUILDINGS ATTACHMENT 7 - SITE PLANS



FILENAME: VZ-024.DWG DATE: 04-12-22

SHEET NO.	DESIGNED:	NO. REVISIONS	HORIZONTAL SCALE:		 WARREN CONSULTING ENGINEERS, INC. 1117 WINGFIELD WAY, SUITE 110 EL DORADO HILLS, CA 95762 (916) 965-1870	EXHIBIT TITLE:	A.P.N. :
C3.1	AT		AS NOTED			UTILITY PLAN	
	DRAWN:		VERTICAL SCALE:			PROJECT:	BENCHMARK 165-002 ELEV. 1320.25
	AT		N/A			GRANADE BUSINESS PROPERTIES LLC	REMARK: W/ CAP STAMPED "DO NOT OIL-OUT"
	CHECKED:		JOB NO.:			IMPROVEMENT PLANS	FROM US-95, EXIT SOUTH ON CAMERON PARK
AT				DR. IN CAMERON PARK, TRAVEL 0.2 MI. ON	CAMERON PARK DR./DURBROOK RD. TO ROBIN LN.		
DATE:					POINT IS 300' SOUTH FROM AHI LOCATED ON	SE CORNER OF DUBROOK RD. (CAMERON PARK	
04-12-22			22-024			DR. 1) AND ROBIN LN. 3' FROM BACK OF	SIDEWALK OF DUBROOK RD.

SYMBOL	SYMBOL NAME	COMMON NAME	QTY	SIZE	NOTES
(Symbol)	Large-leafed tree	Large-leafed tree	10	10' x 10'	10' x 10'
(Symbol)	Medium-leafed tree	Medium-leafed tree	10	10' x 10'	10' x 10'
(Symbol)	Small-leafed tree	Small-leafed tree	10	10' x 10'	10' x 10'
(Symbol)	Shrub	Shrub	10	10' x 10'	10' x 10'
(Symbol)	Flowering shrub	Flowering shrub	10	10' x 10'	10' x 10'
(Symbol)	Ground cover	Ground cover	10	10' x 10'	10' x 10'
(Symbol)	Grass	Grass	10	10' x 10'	10' x 10'
(Symbol)	Water feature	Water feature	10	10' x 10'	10' x 10'
(Symbol)	Light fixture	Light fixture	10	10' x 10'	10' x 10'
(Symbol)	Sign	Sign	10	10' x 10'	10' x 10'
(Symbol)	Path	Path	10	10' x 10'	10' x 10'
(Symbol)	Driveway	Driveway	10	10' x 10'	10' x 10'
(Symbol)	Garage	Garage	10	10' x 10'	10' x 10'
(Symbol)	Office	Office	10	10' x 10'	10' x 10'
(Symbol)	Warehouse	Warehouse	10	10' x 10'	10' x 10'
(Symbol)	Storage	Storage	10	10' x 10'	10' x 10'
(Symbol)	Truck	Truck	10	10' x 10'	10' x 10'
(Symbol)	Trailer	Trailer	10	10' x 10'	10' x 10'
(Symbol)	Tractor	Tractor	10	10' x 10'	10' x 10'
(Symbol)	Harvester	Harvester	10	10' x 10'	10' x 10'
(Symbol)	Generator	Generator	10	10' x 10'	10' x 10'
(Symbol)	Compressor	Compressor	10	10' x 10'	10' x 10'
(Symbol)	Drill	Drill	10	10' x 10'	10' x 10'
(Symbol)	Saw	Saw	10	10' x 10'	10' x 10'
(Symbol)	Tool	Tool	10	10' x 10'	10' x 10'
(Symbol)	Material	Material	10	10' x 10'	10' x 10'
(Symbol)	Equipment	Equipment	10	10' x 10'	10' x 10'
(Symbol)	Vehicle	Vehicle	10	10' x 10'	10' x 10'
(Symbol)	Structure	Structure	10	10' x 10'	10' x 10'
(Symbol)	Foundation	Foundation	10	10' x 10'	10' x 10'
(Symbol)	Wall	Wall	10	10' x 10'	10' x 10'
(Symbol)	Floor	Floor	10	10' x 10'	10' x 10'
(Symbol)	Roof	Roof	10	10' x 10'	10' x 10'
(Symbol)	Foundation	Foundation	10	10' x 10'	10' x 10'
(Symbol)	Wall	Wall	10	10' x 10'	10' x 10'
(Symbol)	Floor	Floor	10	10' x 10'	10' x 10'
(Symbol)	Roof	Roof	10	10' x 10'	10' x 10'
(Symbol)	Foundation	Foundation	10	10' x 10'	10' x 10'
(Symbol)	Wall	Wall	10	10' x 10'	10' x 10'
(Symbol)	Floor	Floor	10	10' x 10'	10' x 10'
(Symbol)	Roof	Roof	10	10' x 10'	10' x 10'
(Symbol)	Foundation	Foundation	10	10' x 10'	10' x 10'
(Symbol)	Wall	Wall	10	10' x 10'	10' x 10'
(Symbol)	Floor	Floor	10	10' x 10'	10' x 10'
(Symbol)	Roof	Roof	10	10' x 10'	10' x 10'
(Symbol)	Foundation	Foundation	10	10' x 10'	10' x 10'
(Symbol)	Wall	Wall	10	10' x 10'	10' x 10'
(Symbol)	Floor	Floor	10	10' x 10'	10' x 10'
(Symbol)	Roof	Roof	10	10' x 10'	10' x 10'
(Symbol)	Foundation	Foundation	10	10' x 10'	10' x 10'
(Symbol)	Wall	Wall	10	10' x 10'	10' x 10'
(Symbol)	Floor	Floor	10	10' x 10'	10' x 10'
(Symbol)	Roof	Roof	10	10' x 10'	10' x 10'
(Symbol)	Foundation	Foundation	10	10' x 10'	10' x 10'
(Symbol)	Wall	Wall	10	10' x 10'	10' x 10'
(Symbol)	Floor	Floor	10	10' x 10'	10' x 10'
(Symbol)	Roof	Roof	10	10' x 10'	10' x 10'
(Symbol)	Foundation	Foundation	10	10' x 10'	10' x 10'
(Symbol)	Wall	Wall	10	10' x 10'	10' x 10'
(Symbol)	Floor	Floor	10	10' x 10'	10' x 10'
(Symbol)	Roof	Roof	10	10' x 10'	10' x 10'
(Symbol)	Foundation				







DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 8 - LANDSCAPE PLANS

### WATER EFFICIENT LANDSCAPE WORKSHEET

This worksheet is used to determine the water efficiency of a landscape design. The user must provide information about the landscape design and the water efficiency of the plants used. The worksheet will calculate the water efficiency of the landscape design and provide a summary of the results.

Plant Name	Quantity	Water Efficiency Rating	Water Efficiency Score
Plant 1	1	1	1
Plant 2	1	1	1
Plant 3	1	1	1
Plant 4	1	1	1
Plant 5	1	1	1
Plant 6	1	1	1
Plant 7	1	1	1
Plant 8	1	1	1
Plant 9	1	1	1
Plant 10	1	1	1
Plant 11	1	1	1
Plant 12	1	1	1
Plant 13	1	1	1
Plant 14	1	1	1
Plant 15	1	1	1
Plant 16	1	1	1
Plant 17	1	1	1
Plant 18	1	1	1
Plant 19	1	1	1
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Plant 91	1	1	1
Plant 92	1	1	1
Plant 93	1	1	1
Plant 94	1	1	1
Plant 95	1	1	1
Plant 96	1	1	1
Plant 97	1	1	1
Plant 98	1	1	1
Plant 99	1	1	1
Plant 100	1	1	1

**Summary of Results:**

Total Water Efficiency Score: 100

Water Efficiency Rating: 100%

Water Efficiency Score: 100%

### WATER EFFICIENT LANDSCAPE WORKSHEET, PERFORMANCE CHECKLIST, AND SOIL REPORT

This worksheet is used to determine the water efficiency of a landscape design. The user must provide information about the landscape design and the water efficiency of the plants used. The worksheet will calculate the water efficiency of the landscape design and provide a summary of the results.

Plant Name	Quantity	Water Efficiency Rating	Water Efficiency Score
Plant 1	1	1	1
Plant 2	1	1	1
Plant 3	1	1	1
Plant 4	1	1	1
Plant 5	1	1	1
Plant 6	1	1	1
Plant 7	1	1	1
Plant 8	1	1	1
Plant 9	1	1	1
Plant 10	1	1	1
Plant 11	1	1	1
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Plant 99	1	1	1
Plant 100	1	1	1

**Summary of Results:**

Total Water Efficiency Score: 100

Water Efficiency Rating: 100%

Water Efficiency Score: 100%

**DESIGNER:** [Signature]

**DATE:** 10/23/22

**PROJECT:** [Project Name]

**LOCATION:** [Location]

**CLIENT:** [Client Name]

**CONTACT:** [Contact Information]

**DESIGNER:** [Signature]

**DATE:** 10/23/22

**PROJECT:** [Project Name]

**LOCATION:** [Location]

**CLIENT:** [Client Name]

**CONTACT:** [Contact Information]

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 9 - ARBORIST REPORT**



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April 27, 2023

Doug Granade, DG Granade, Inc.

4755 Business Dr

Shingle Springs, CA 95682

APN: 109-240-032

## **Oak Resources Technical Report**

Report Prepared by

Chad Dykstra, ISA Certified Arborist WE-5893A

Member, American Society of Consulting Arborists

ISA TRAQ Qualified Tree Risk Assessor

Certified Tree Care Safety Professional

Chad@foothillforestcare.com

530-957-0128

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
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Doug Granade, 4755 Business Dr

April 27, 2023

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## **Summary**

There will be two oak trees, numbered 1 and 2, impacted and removed for the proposed development. One oak shrub will be removed as well. None of the oak trees impacted and removed are above 24" in diameter. The property is not located in the IBC. Mitigation options include planting a mitigation garden as outlined in Appendix A.

## **Introduction**

### **Assignment**

We were called to perform an inspection of the location of development at the above address and to assess the amount of canopy that would be impacted by this development. I was contacted by Mr. Doug Granade, the property owner, to appraise the trees that are being removed for this project. Mr. Granade provided documents and project plans for my review.

### **Assignment Limits**

I did not ascend any of the trees on the property. Data collected is limited to a casual ground inspection. No trees were assessed for risk of failure, please contact the office to schedule a formal risk assessment if you are interested in this service.

### **Purpose and Use of the Report**

The purpose of this report is to comply with the Oak Resource Management Plan and associated Oak Resources Technical Report Checklist.

## **Observations**

This report is in response to field observations that were performed on April 14th, 2023 by Chad Dykstra and Caroline Bartz at the above address. Tree Plotter imagery was used to determine the locations of the trees. The location of the: buildings, driveway, and other utilities associated with the project were observed. There are nine oak trees toward the northwestern corner of the parcel. Examining the site plan, two of the oak trees are in the area of disturbance. There is one oak shrub that is also located in the area of disturbance. Tree 1, (Appendix B, 1.1) is a black oak in poor condition. Tree 2 (Appendix B, 1.2) is a valley oak in fair condition. The oak shrub (Appendix B, 1.3) measures 5 inches in diameter at standard height.

## **Testing and Analysis**

Tree Plotter was used to plot the trees, iPads, iPhones and a diameter tape were used to collect individual tree characteristics, health and other relevant data points. The data collected during the inspections was later used to calculate oak resource impact.

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
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Doug Granade, 4755 Business Dr

April 27, 2023

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## **Conclusions**

### **Project-Related Impacts to Oak Resources**

All oak trees on the property were evaluated. The canopy of the impacted oak trees is outlined in Appendix A. See Appendix B for photos showing the condition of the exempt trees. Tree 1, 2, and the shrub will be removed. Tree 1 is exempt and the oak shrub will not be mitigated for. Tree 2 will be mitigated by selecting one of the options below. The parcel doesn't qualify as oak woodland with 5% total canopy cover of oak species.

Total Site Area: 7.31 acre

Total Oak Tree Canopy Area on Site: 0.397 acres

Oak woodland coverage: 5%

Total Removal Inches: 38 inches

Oak Woodland Area Exempt From Mitigation: 24 inches

Mitigation Required For: 14 inches

### **Mitigation:**

1. Replacement planting on-site within an area subject to a deed restriction or conservation easement;

"The total of replacement trees shall have a combined diameter of the tree(s) removed. Replacement tree species shall be the same proportion as those removed. Replacement trees shall be planted on-site and monitored and maintained for a period of 7 years, calculated from the day of planting, Replacement plantings shall be inspected, maintained and documented consistent with requirements for Mitigation Maintenance, Monitoring and Reporting."

**The mitigation can be fulfilled by planting 14 valley oaks, in the 15 gallon size. These trees are about 1 inch in diameter each. If this avenue of mitigation is adopted, these trees shall be planted in an area that will be monitored for a period of 7 years as specified in the El Dorado Oak Resource Management Plan quoted above.**

### **Tree Protection During Development**

See Avoiding Tree Damage During Construction in Appendix C.

Please contact Chad Dykstra, of Foothill Forest Care if there are any questions about this report.

Disclaimer: I, Chad Dykstra, have analyzed the situation, applied the proper method(s) utilized within my profession, and performed a reasonableness test to assess my decisions, but offer no guarantees on my services or opinions, written or implied.

**Respectfully submitted,**

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 9 - ARBORIST REPORT**

Doug Granade, 4755 Business Dr

April 27, 2023

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**Chad Dykstra**

ISA Certified Arborist WE-5893A

Member, American Society of Consulting Arborists

ISA TRAQ Qualified Tree Risk Assessor

CTSP Certified Tree Care Safety Professional

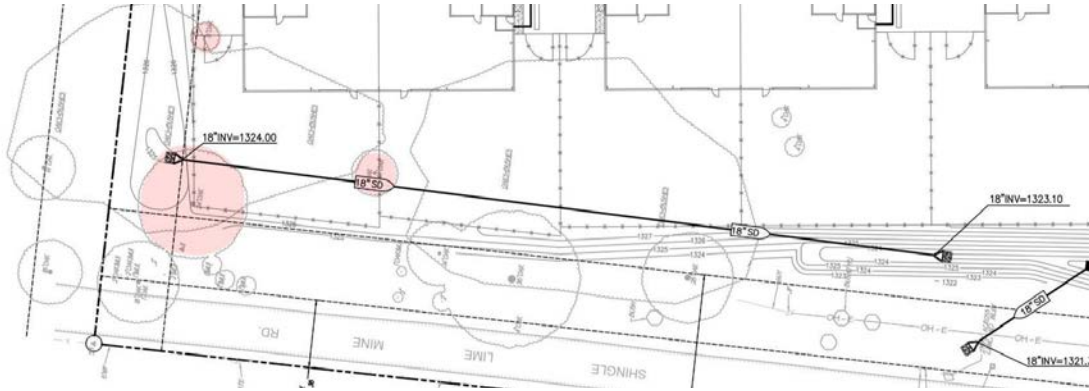
**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
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Doug Granade, 4755 Business Dr

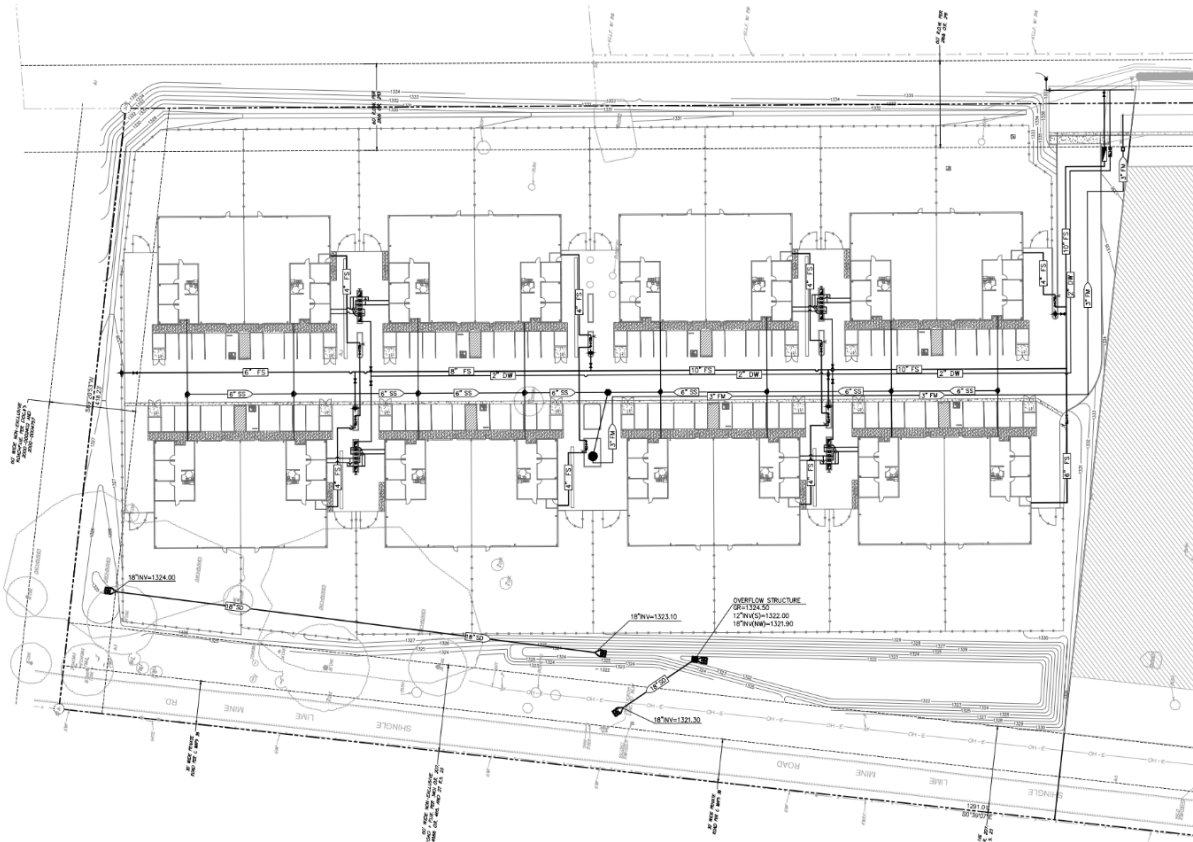
April 27, 2023

**APPENDIX A - MAPS AND EXHIBITS**

**Location of Individual Native Oak Trees and Impacted Oak Resources (Red)**



**Location of Proposed Project-Related Improvements**





# DR22-0009 GRANADE BUSINESS PROPERTIES, LLC OFFICE/WAREHOUSE BUILDINGS ATTACHMENT 9 - ARBORIST REPORT

Doug Granade, 4755 Business Dr

April 27, 2023

Mitigation Garden Plans, Please see 14 Valley Oaks, *Quercus lobata*, in bottom right.




PLANT LEGEND						
	BOTANICAL NAME	COMMON NAME	QTY	SIZE	WATER USE	REMARKS
   	TREES					
	Lagerstroemia indica 'Dynamite'	Dynamite Crape Myrtle	4	15 Gallon	Low	
	Pistacia chinensis 'Keith Davey'	Keith Davey Chinese Pistache	8	5 Gallon	Low	
	Quercus lobata	Valley Oak	14	5 Gallon	Low	
	Quercus wislizenii	Interior Live Oak	9	15 Gallon	Low	
 	SHRUBS					
	Rosmarinus officinalis 'Ken Taylor'	Upright Rosemary	5	1 Gallon	Low	
	Mahonia aquifolium	Oregon Grape Holly	16	5 Gallon	Low	
  	GROUND COVER					
	Arctostaphylos 'Emerald Carpet'	Manzanita Emerald Carpet	29	1 Gallon	Low	
	Rosmarinus officinalis 'Irene'	Dwarf Rosemary	48	1 Gallon	Low	
  	GRASSES					
	Helictotrichon sempervirens 'Sapphire'	Blue Oat Grass	44	1 Gallon	Low	
	Muhlenbergia rigens	Deer Grass	24	1 Gallon	Low	

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**APPENDIX B - SITE PHOTOS**



<b>1.1, Interior Live Oak</b>	
<b>1.2, Valley Oak</b>	



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Doug Granade, 4755 Business Dr

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<p><b>1.3, Shrub, less than 6 inches DBH</b></p>	
<p><b>Site Photo, Underbrush and gray pine in this will be removed for development as well.</b></p>	

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Doug Granade, 4755 Business Dr

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## **APPENDIX C - Avoiding Tree Damage During Construction**



### **The Importance of Engaging an Arborist**

The process of protecting trees during construction is not always easy, but the benefits can be substantial. Larger trees provide aesthetic beauty, financial value, and benefits to the environment and quality of life. Construction damage to trees may take many years to impact the tree and can be deadly. Small injuries accumulating over time can start a hard-to-reverse decline. To ensure that trees will survive and thrive after construction, it is important to work with a qualified arborist from the beginning of the planning phase through to the end of the post-construction phase of the project. The sooner and more involved an arborist is in the project, the greater chance of maintaining or improving tree health and survival.

### **The Critical Root Zone and Tree Protection Zone**

A tree's tolerance for damage depends on its age, species, condition, and other factors. One of the most important factors is the tree's root zone. A tree's root zone can extend far from the trunk and outer branch spread. The portion of the root zone that is essential for tree health and stability is called the critical root zone. One of the early steps in protecting trees and the critical root zone during construction is to have an arborist define a tree protection zone. This area should have specific limitations to construction activity and requirements for protection. Finding the balance between project requirements and protection zones requires a knowledgeable arborist and a cooperative construction team.

### **How Construction Can Damage or Kill Trees**

*Root Damage:* Grading, trenching, paving, altering drainage patterns, and adding or removing soil within a tree's critical root zone damages tree roots. If too many roots are damaged, the tree will be affected. *Soil Compaction:* Heavy construction equipment increases soil density (compaction), slowing root growth, limiting water penetration, and decreasing oxygen needed for root survival.

*Physical Injury to Trunk Crown and Root Collar:* Construction equipment can break branches, tear bark, and wound the trunk. These wounds weaken the tree and allow the entry of decay-causing fungi. The base of the tree and its root collar are especially vulnerable to damage from machinery and soil or debris placed over the lower trunk.

*Heat and Chemical Damage:* Bark and foliage are easily damaged by the heat from running machinery and burning material. When spilled fuels and runoff from cleaning concrete delivery vehicles seep into the soil, soil chemistry changes and root growth and function are reduced.

*Removal of Supporting Trees:* Closely spaced trees grow as a community, supporting and protecting each other. Removing some of the trees exposes the remaining trees to sunscald stress or structural failure.

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ATTACHMENT 9 - ARBORIST REPORT**

Doug Granade, 4755 Business Dr

April 27, 2023

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### **Getting Advice**

To protect your trees during construction, engage an arborist to be a member of the project design team. The arborist is typically the only member of the team that represents the interest of the trees. Have the arborist work on any decisions that impact trees throughout all the phases of the project.

### **Planning and Design Phase**

Ensure the arborist is involved early in the planning phase of construction. Minor design changes can result in significant reductions in tree damage and make a great difference in whether a tree will survive. There are many options an arborist might suggest during the planning and design phase to protect trees: driveways and walls can be realigned; grading can be reconfigured; structures such as footings or paving can be designed to bridge over roots; and utilities can be rerouted or tunneled under roots. All tree protection requirements determined by the arborist should be incorporated into the project plans.

### **Pre-Construction Phase**

Prior to the start of work, an arborist can recommend where tree protection fences should be installed. Fences should have signs attached to inform people of why they should stay out and who to contact if they need to get in. If machinery must come close to a tree trunk, an arborist can recommend how the trunk can be protected from damage with additional protection materials. If there will be trenching, grading or other excavation near trees that may damage roots, an arborist can prune roots out of the way before excavation, or cleanly cut them before any damage is done. If there is significant root loss or if construction is done during dry periods, an arborist can develop a temporary irrigation system. This may be from nearby hoses or water may need to be trucked into the site. An arborist can also help create a plant health care program that will monitor and treat stress, diseases and insect pests throughout all phases of construction.

### **Construction Phase**

During the construction phase, trees and any required protection zones must be monitored by an arborist regularly. Having access to the construction site allows the arborist to confirm the requirements are properly being followed. Construction plans may change often and the arborist can make adjustments to protect trees as the project changes. Flexibility and establishing trust between all team members is critical to the successful preservation of large trees.

### **Post-Construction Phase**

At the end of the project, installation of new plantings, irrigation, lighting, and planting soil are often made close to existing trees. These new changes in a tree's environment can have a devastating impact on the tree. Despite the best tree protection plans and intentions, construction can result in unintended damage that may take years to become apparent. An arborist can develop a post construction maintenance plan to help trees recover and adapt to their new environment.

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**Arborist Disclosure Statement**

Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

Treatment, pruning and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risks associated with trees is to eliminate all trees.

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OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 9 - ARBORIST REPORT**

Doug Granade, 4755 Business Dr

April 27, 2023

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**Assumptions and Limiting Conditions**

1. Consultant assumes that any legal description provided to Consultant is correct and that title to property is good and marketable. Consultant assumes no responsibility for legal matters. Consultant assumes all property appraised or evaluated is free and clear, and is under responsible ownership and competent management.
2. Consultant assumes that the property and its use do not violate applicable codes, ordinances, statutes or regulations.
3. Although Consultant has taken care to obtain all information from reliable sources and to verify the data insofar as possible, Consultant does not guarantee and is not responsible for the accuracy of information provided by others.
4. Clients may not require a Consultant to testify or attend court by reason of any report unless mutually satisfactory contractual arrangements are made, including payment of an additional fee for such Services as described in the Consulting Arborist Agreement.
5. Unless otherwise required by law, possession of this report does not imply right of publication or use for any purpose by any person other than the person to whom it is addressed, without the prior express written consent of the Consultant.
6. Unless otherwise required by law, no part of this report shall be conveyed by any person, including the Client, the public through advertising, public relations, news, sales or other media without the Consultant's prior express written consent.
7. This report and any values expressed herein represent the opinion of the Consultant, and the Consultant's fee is in no way contingent upon the reporting of a specific value, a stipulated result, the occurrence of a subsequent event or upon any finding to be reported.
8. Sketches, drawings and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys. The reproduction of any information generated by architects, engineers or other consultants and any sketches, drawings or photographs is for the express purpose of coordination and ease of reference only. Inclusion of such information on any drawings or other documents does not constitute a representation by Consultant as to the sufficiency or accuracy of the information.
9. Unless otherwise agreed, (1) information contained in this report covers only the items examined and reflects the condition of those items at the time of inspection; and (2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing or coring. Consultant makes no warranty or guarantee, express or implied that the problems or deficiencies of the plans or property in question may not arise in the future.
10. Loss or alteration of any part of this Agreement invalidates the entire report.

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 9 - ARBORIST REPORT**

Doug Granade, 4755 Business Dr

April 27, 2023

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**Certificate of Performance**

I, Chad Dykstra, certify that:

I have personally inspected the trees and site referred to in this report, and have stated my findings accurately. The extent of the inspection is stated in the attached report under Assignment Limits.

I have no current or prospective interest in the vegetation, or the property that is the subject of this report and have no personal interest or bias with respect to the parties involved.

The analysis, opinions and conclusions stated herein are my own and are based on current scientific procedures and facts.

My analysis, opinions, and conclusions were developed, and this report has been prepared according to commonly accepted arboricultural practices.

No one provided significant professional assistance to me, except as indicated within the report.

My compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client, or any other party, nor upon the results of the assignment, the attainment of stipulated results, or the occurrence of any subsequent events.

I further certify that I am a member in good standing of the International Society of Arboriculture (ISA) and a Certified Arborist. I am also a member in good standing of the American Society of Consulting Arborists. I have been involved in the practice of arboriculture and the care and study of trees for over 30 years.

Signed: Chad Dykstra



Date: April 27, 2023



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 10 - FACILITIES IMPROVEMENT LETTER**



Letter No.: DS0322-066

March 4, 2022

VIA EMAIL

Doug Granade  
DG Granade Business Properties, LLC  
4420 Business Drive  
Shingle Springs, CA 95682  
Email: [doug.granade@dggranade.com](mailto:doug.granade@dggranade.com)

Subject: Facility Improvement Letter (FIL) 3664FIL, Granade Business Properties  
Assessor's Parcel No. 109-240-030 (Shingle Springs)

Dear Mr. Granade:

This letter is in response to your request dated February 16, 2022 and is valid for a period of three years. If facility improvement plans for your project have not been submitted to El Dorado Irrigation District (EID or District) within three years of the date of this letter, a new Facility Improvement Letter will be required.

Design drawings for your project must be in conformance with the District's *Water, Sewer and Recycled Water Design and Construction Standards*.

This proposed project consists of 8 commercial buildings on 7.5 acres. Should this parcel be subdivided in the future you would be required to purchase additional water and sewer equivalent dwelling units (EDUs), as well as provide separate EID water meters for each parcel to be created. Water service, sewer service, private fire service and fire hydrants are requested. The property is within the District boundary.

This letter is not a commitment to serve, but does address the location and approximate capacity of existing facilities that may be available to serve your project.

**Water Supply**

As of January 1, 2021, there were 21,913 EDUs of water supply available in the Western/Eastern Water Supply Region. Your project as proposed on this date would require 1 EDU of water supply.

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 10 - FACILITIES IMPROVEMENT LETTER**

Letter No.: DS0322-066  
To: Doug Granade



March 4, 2022  
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**Water Facilities**

A 10-inch water line is currently under construction in Business Drive (see enclosed System Map). The El Dorado County Fire Protection District has determined that the minimum fire flow for this project is 1,500 GPM for a 2-hour duration while maintaining a 20-psi residual pressure. According to the District's hydraulic model, the existing system can deliver the required fire flow. In order to provide this fire flow and receive service, you must construct a water line extension connecting to the 10-inch waterline that will be located near the southern parcel boundary of the project. The hydraulic grade line for the existing water distribution facilities is 1,670 feet above mean sea level at static conditions and 1,560 feet above mean sea level during fire flow and maximum day demands.

The flow predicted above was developed using a computer model and is not an actual field flow test.

**Sewer Facilities**

There is a 4-inch sewer force main currently under construction in Business Drive that will be located near the southern boundary of the project. This sewer line and the downstream sewer system has adequate capacity at this time. In order to receive service from this line, an extension of facilities of adequate size must be constructed. A new private full sewage lift station will be required to serve this project. Your project as proposed on this date would require 1 EDU of sewer service.

**Easement Requirements**

Proposed water lines, sewer lines and related facilities must be located within an easement accessible by conventional maintenance vehicles. When the water lines or sewer lines are within streets, they shall be located within the paved section of the roadway. No structures will be permitted within the easements of any existing or proposed facilities. The District must have unobstructed access to these easements at all times, and generally does not allow water or sewer facilities along lot lines.

Easements for any new District facilities constructed by this project must be granted to the District prior to District approval of water and/or sewer improvement plans, whether onsite or offsite. In addition, due to either nonexistent or prescriptive easements for some older facilities, any existing onsite District facilities that will remain in place after the development of this property must also have an easement granted to the District.

**Environmental**

The County is the lead agency for environmental review of this project per Section 15051 of the California Environmental Quality Act Guidelines (CEQA). The County's environmental document should include a review of both offsite and onsite water and sewer facilities that may



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
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ATTACHMENT 10 - FACILITIES IMPROVEMENT LETTER**

Letter No.: DS0322-066  
To: Doug Granade



March 4, 2022  
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be constructed by this project. You may be requested to submit a copy of the County's environmental document to the District if your project involves significant off-site facilities. If the County's environmental document does not address all water and sewer facilities and they are not exempt from environmental review, a supplemental environmental document will be required. This document would be prepared by a consultant. It could require several months to prepare and you would be responsible for its cost.

**Summary**

Service to this proposed development is contingent upon the following:

- The availability of uncommitted water supplies at the time service is requested;
- Approval of the County's environmental document by the District (if requested);
- Executed grant documents for all required easements;
- Approval of an extension of facilities application by the District;
- Approval of facility improvement plans by the District;
- Construction by the developer of all onsite and offsite proposed water and sewer facilities;
- Acceptance of these facilities by the District; and
- Payment of all District connection costs.

Services shall be provided in accordance with El Dorado Irrigation District Board Policies and Administrative Regulations, as amended from time-to-time. As they relate to conditions of and fees for extension of service, District Administrative Regulations will apply as of the date of a fully executed Extension of Facilities Agreement.

If you have any questions, please contact Marc Mackay at (530) 642-4135.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Michael J. Brink', is written over a horizontal line.

Michael J. Brink, P.E.  
Supervising Civil Engineer

MB/MM:kh

Enclosures: System Map

cc w/ System Map:

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 10 - FACILITIES IMPROVEMENT LETTER**

Letter No.: DS0322-066  
To: Doug Granade



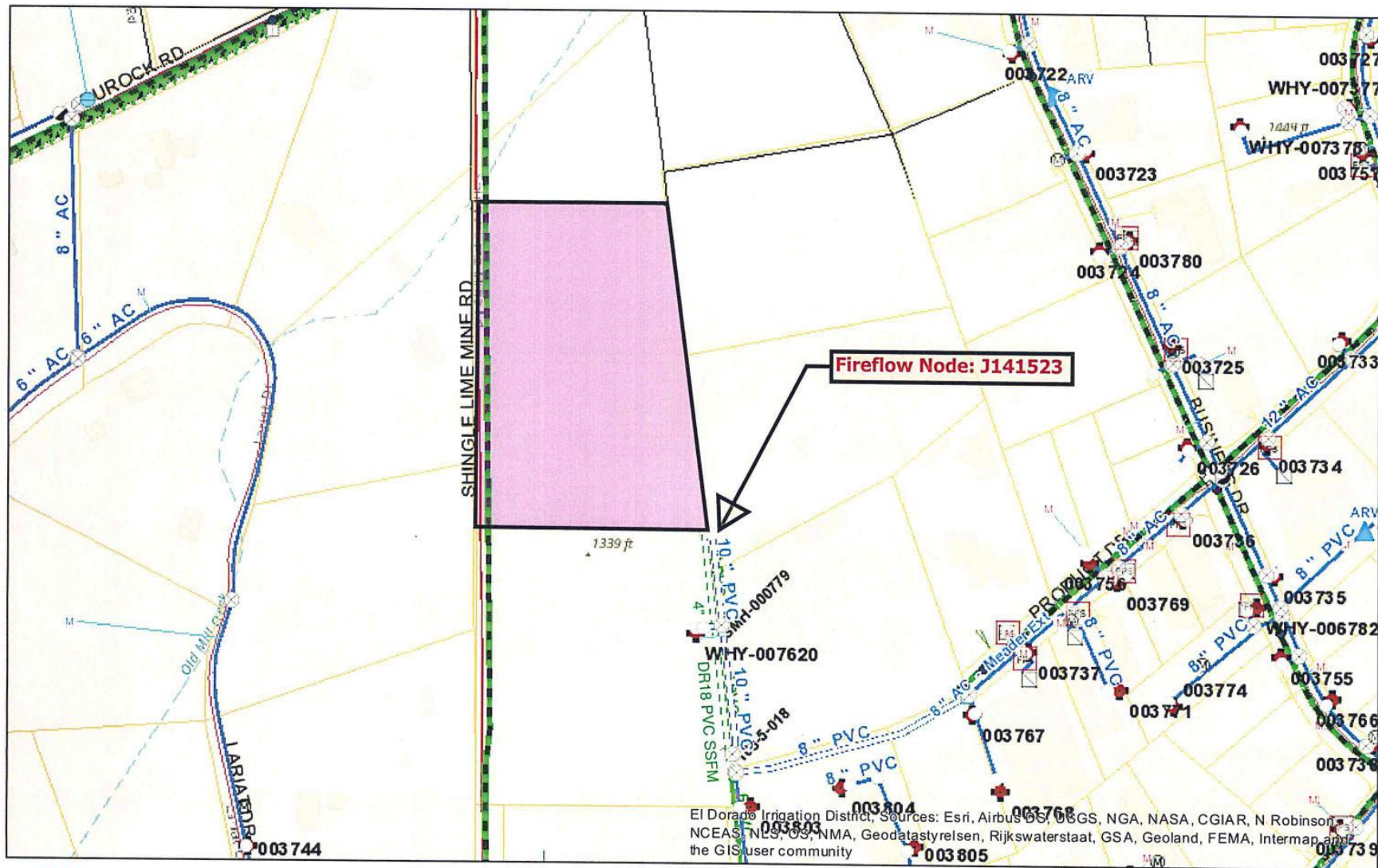
March 4, 2022  
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Gina Hamilton - Senior Planner  
El Dorado County Development Services Department  
Via email - [gina.hamilton@edcgov.us](mailto:gina.hamilton@edcgov.us)

Braden Stirling  
El Dorado County Fire District  
Via email - [stirlingb@eldofire.com](mailto:stirlingb@eldofire.com)

# Granade Business Properties

DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 10 - FACILITIES IMPROVEMENT LETTER



Scale: NTS

Date: March 3, 2022

Project: Granade Business Properties

APN: 109-240-030



Author:

Print date: March 3, 2022

WARNING: No accuracy of map implied until field checked by EID. Exact site locations

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**



FSI TRAFFIC ENGINEERING  
7571 Alpine Way  
Tujunga, CA 91042  
925.755.6189

**TRANSPORTATION IMPACT ASSESSMENT**

for

**Granade Business Park  
Business Drive and Product Drive  
Shingle Spring, CA 95682**

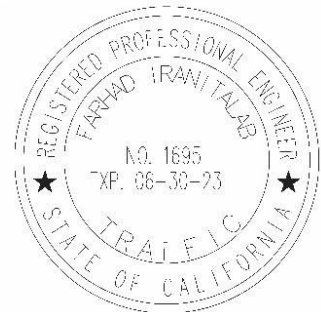
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Prepared:  
**September 8 , 2023**

Prepared  
By:

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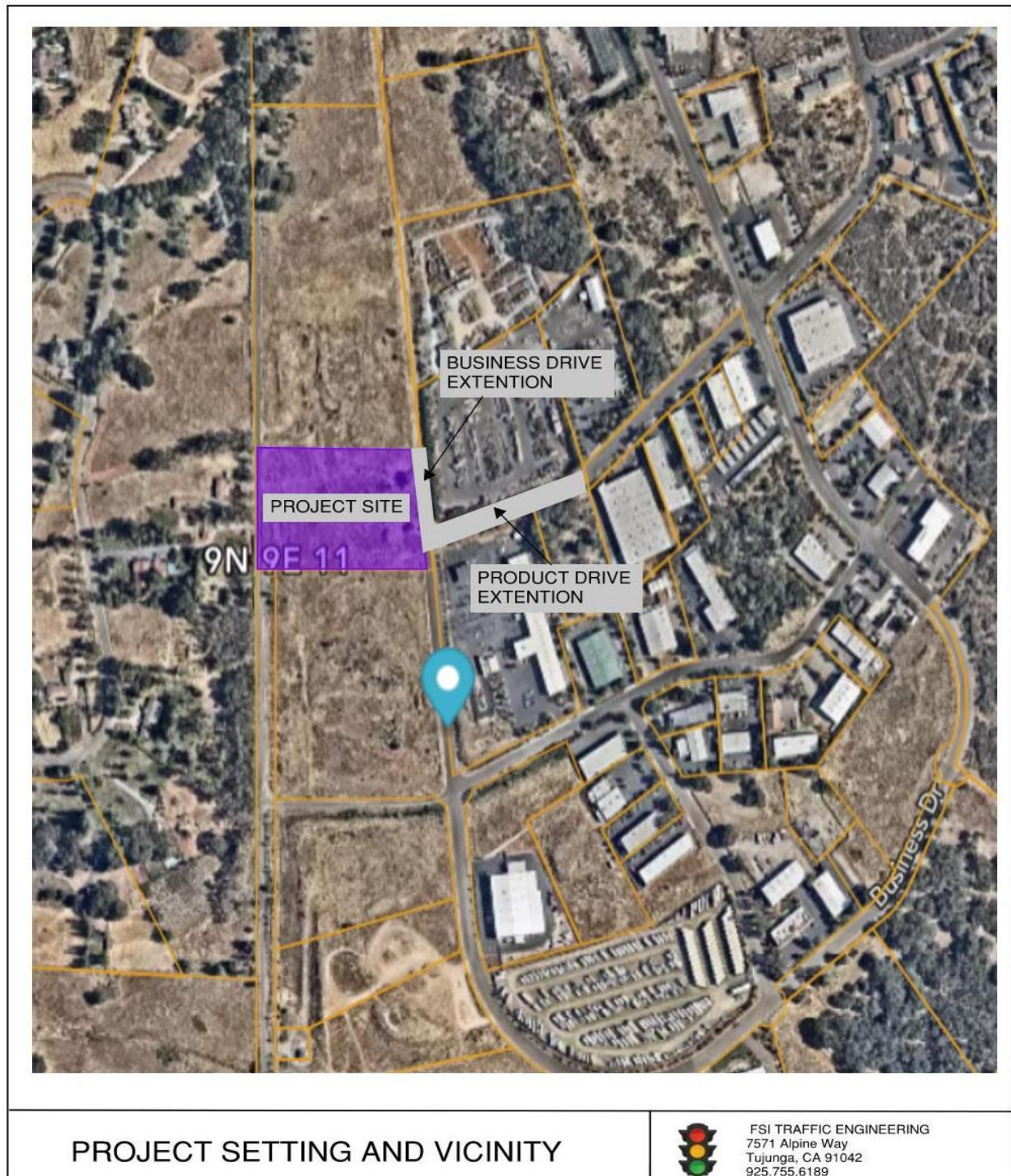




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**Executive Summary**

This traffic impact study describes the roadway network conditions under existing and existing plus project. The proposed Project is located on a 7.5-acres vacant parcel within Barnett Business Park at 4755 Business Drive in Shingle Springs Community Region, El Dorado County.



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The proposed project includes the construction of eight 9,000 square feet of warehouses/office buildings that would be occupied by up to sixteen single users such as small contractors, manufacturers, distributors. Each unit include approximately 2,200 square feet of office, and 6,800 square feet of warehouse space. The project provides eight standard parking spaces and one handicap parking stall in front of each building and four staff parking spaces at the back of the building on gravel treated area. The parking stalls provided is in conformance with the County parking requirements.

This Traffic Impact Study was prepared based on the protocols and procedures included in the El Dorado County “Transportation Impact Study Guidelines” dated November 2014, and approval from El Dorado County Department of Transportation staff.

***Statement of deficiency and Improvement Measures***

General Plan Circulation Policy TC-Xd provides Level of Service standards for County Roads as follows:

“Level of Service (LOS) for County-maintained roads and State Highways within the unincorporated areas of the county shall not be worse than LOS E in the Community Regions or LOS D in the Rural Centers and Rural Regions.”

If a project causes the peak hour LOS on a County Road or State Highway that would otherwise meet the County standards (without the project) to exceed the LOS mentioned above, then there are no deficiencies.

If any County Road or State Highway fails to meet the county standards for peak hour LOS without the proposed project, and the project will worsen conditions on the road or highway, then the deficiency shall be considered unacceptable.

The term, worsen is defined for the purpose of this paragraph according to General Plan Policy TC-Xe as follows:

- A two (2) percent increase in traffic during the a.m. peak hour, p.m. peak hour, or daily, or
- The addition of 100 or more daily trips, or
- The addition of 10 or more trips during the a.m. peak hour or the p.m. peak hour

The project is located within Shingle Springs, which is a designated Community Region in El Dorado County.

The project is consistent with the existing General Plan Zoning and land use and therefore, would not be required to evaluate the cumulative conditions.

***Existing Conditions***

Evaluation of existing conditions indicates that all studied intersections are operating at an acceptable level of service except for the intersection of S. Shingle Spring Road at US 50 off and on ramp/Mother Lode, which operates at LOS “F” during pm peak hour.

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***Existing Plus Project Conditions***

Evaluation of this scenario indicates that the conditions at all studied intersections remain the same and continue operating at an acceptable level of service, except for the intersection of S. Shingle Spring Road at US 50 off and on ramp/Mother Lode, which continue to operate at LOS “F” during pm peak hour.

The project would not interfere with any existing bus routes and would not remove or relocate any existing bus stops.

Based on the project trip distribution as shown in Figure 8 the project will add a small number of trips (max. 4/hour) to the US 50 off ramp and is not expected to significantly add to off ramp queue.

In summary, the following deficiencies are considered unacceptable with the addition of the project trips:

deficiency #1

The project deficiency is considered significant at the intersection of S. Shingle Spring and US 50 off and on ramp/ Mother Lode, because the intersection LOS is below the County standard threshold of LOS “E” and project adds more than 10 trips to the intersection during pm peak.

Improvement #1

Completion of planned US 50/Ponderosa/S. Shingle Road Interchange, Project No. 36104010, and US 50/ Ponderosa/Durock Road realignment, project No. 36104008, provides capacity improvements to the interchange. These projects are included in the County's 20-year Capital Improvement Program (CIP) and would improve the operations at all intersections along S. Shingle Road/Ponderosa/ Durock/ US 50 interchange. The exhibits on pages 25 and 26 are excerpts from 2022 El Dorado County CIP document.

With the improvements described above the operational level of service will be improved to an acceptable level.

***CEQA Transportation Analysis (VMT)***

The State of California Governor’s Office of Planning and Research (OPR) issued proposed updates to the CEQA guidelines in November 2017 and an accompanying technical advisory guidance finalized in December 2018 (OPR Technical Advisory) that amends the Appendix G question for transportation impacts to delete reference to vehicle delay and level of service and instead refer to Section 15064.3, subdivision (b)(1) of the CEQA Guidelines asking if the project will result in a substantial increase in vehicle miles traveled (VMT).

Accordingly, for the purpose of environmental review under CEQA, El Dorado County adopted Resolution 141-2020 which sets thresholds of significance for land use projects.

Based on the review of the Resolution, the described land development policies do not include or clearly define the industrial park development threshold of significant for VMT impact. The main

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emphasis is residential, commercial, and mixed-use land developments. The methodology used for VMT evaluation is to compare the travel distance from El Dorado County to existing industrial park developments in the region as shown in Figure 11, and the opportunity the proposed development provides to lessen the travel distance for the contractors who reside within the El Dorado County.

Because of the operational nature of the proposed industrial development and the fact that there is no retail customer base, the TDM measures do not affect the VMT. It is the opinion of this study that the proposed industrial park will reduce the overall VMT within the region by reducing the distance travelled.



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Appendix A- Traffic Volume Raw Data

Appendix B- Existing Conditions LOS Calculations

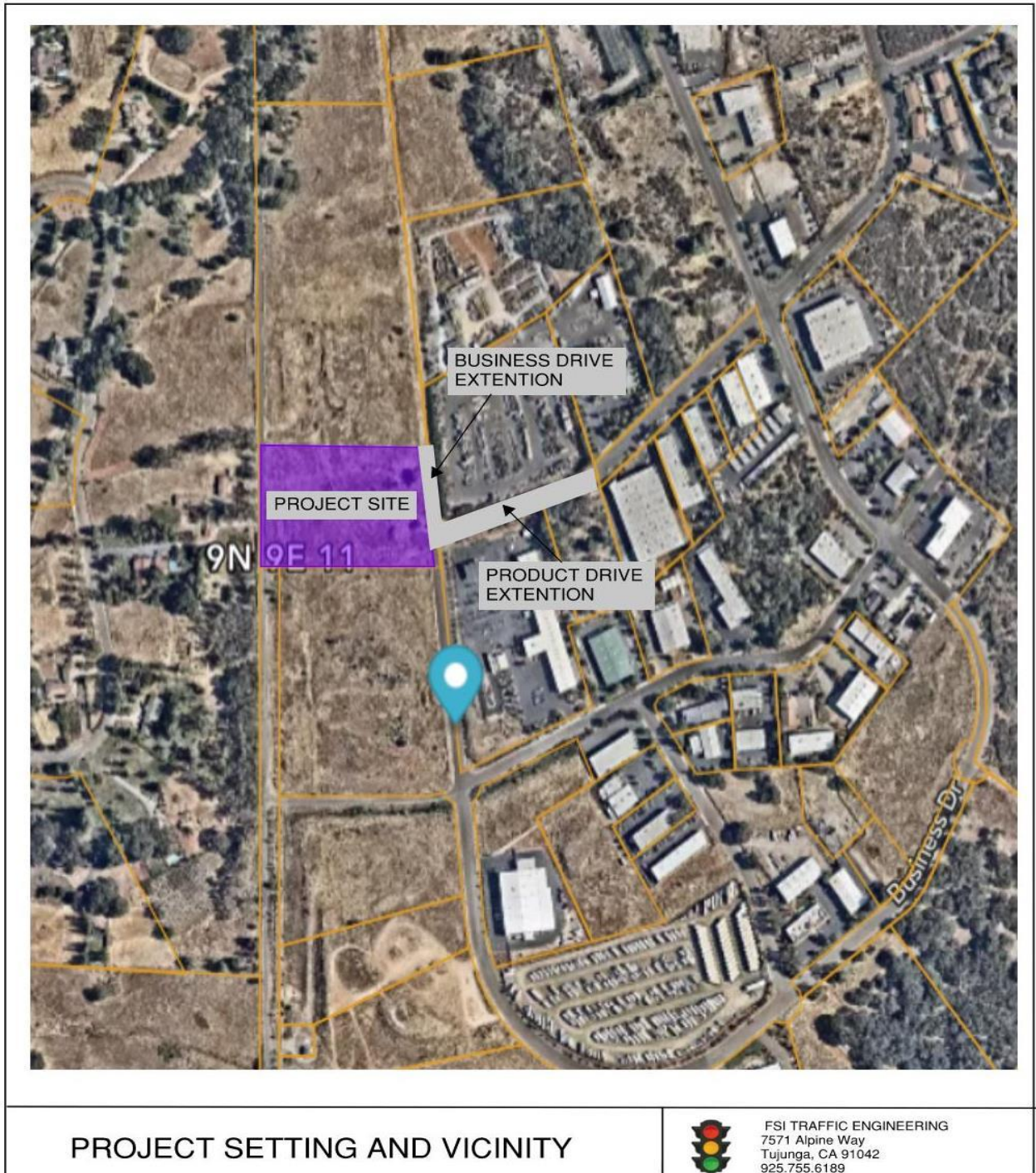
Appendix C- Existing Plus Project LOS Calculations

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**1.0 BACKGROUND**

***1.1 Project Setting***

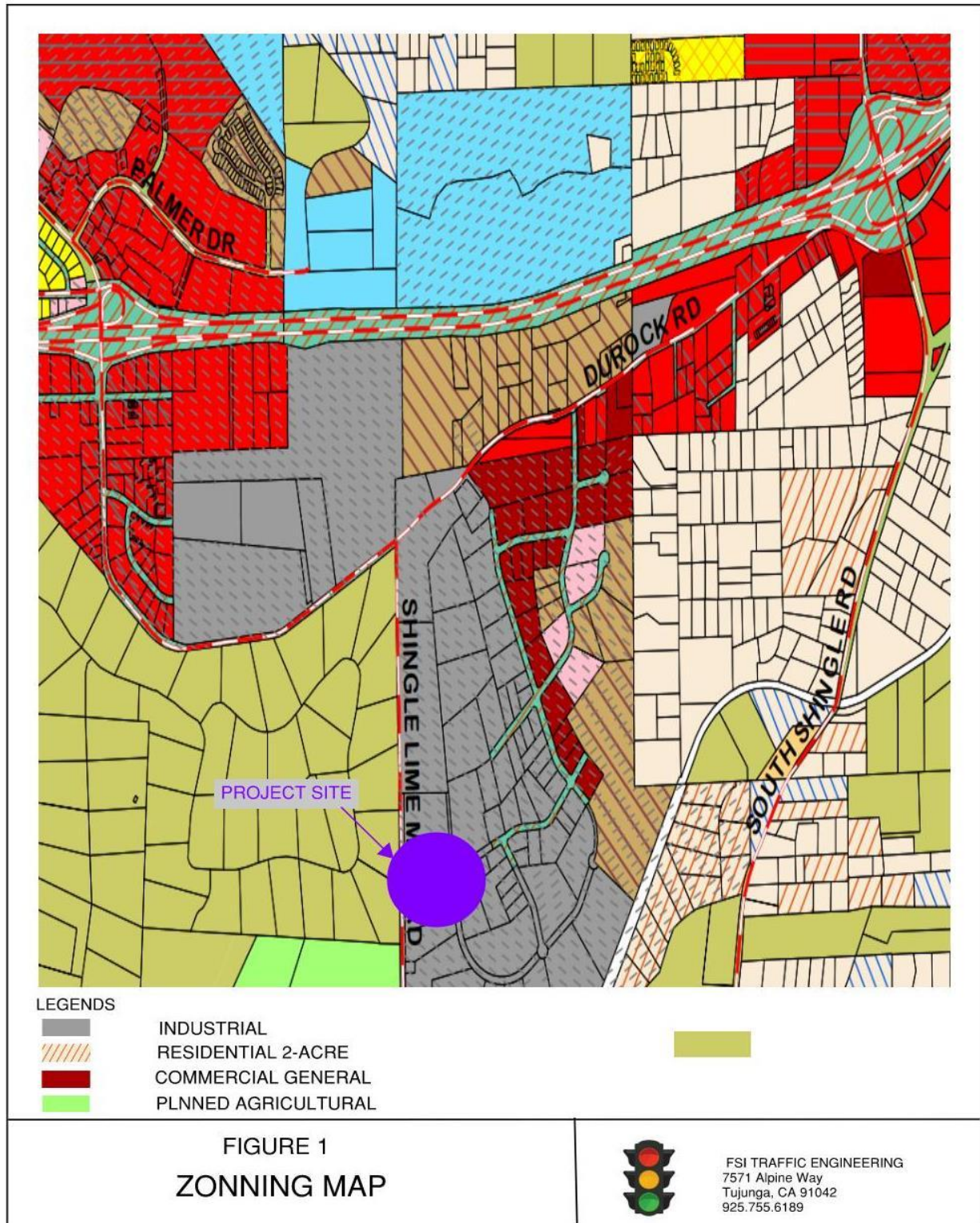
The proposed Project is located on a 7.5-acres vacant parcel within Barnett Business Park at 4755 Business Drive in Shingle Springs Community Region, El Dorado County.





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The proposed project is in the Industrial (I) zone as defined by El Dorado County Land Use Plan, within TAZ 257. Figure 1 presents the Zoning Map.



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Industrial Zone, as defined in Article 2 “the purpose of this land use category is to provide for a full range of light and heavy industrial uses. Types of uses that would be permitted include manufacturing, processing, distribution, and storage. This designation is considered appropriate within Community Regions, Rural Centers, and Rural Regions.”

The proposed project is consistent with the General Plan land use definition.

This report will evaluate the operational level of service at selected intersections, Vehicle Miles Traveled, and On-Site Transportation Review (OSTR). following the information as required by the El Dorado County Transportation Impact Study Guidelines for On Site Transportation Review, which includes:

1. Existence of any current traffic problems in the local area such as a high-accident locations, non-standard intersection or roadway, or an intersection in need of a traffic signal
2. Adequacy of vehicle parking relative to both the anticipated demand and zoning code requirements
3. Adequacy of the project site design to fully satisfy truck loading demand on-site, when the anticipated number of deliveries and service calls may exceed 10 per day.
4. Adequacy of the project site design to convey all vehicle types.

### ***1.2 Project Description***

The proposed project includes the construction of eight 9,000 individual warehouses/office to be rented to up to sixteen single users such as small contractors, manufacturers. Each unit include approximately 2,200 square feet of office, and 6,800 square feet of warehouse space. The project provides eight standard parking spaces and one handicap parking stall in front of each building and four staff parking spaces at the back of the building on gravel treated area.

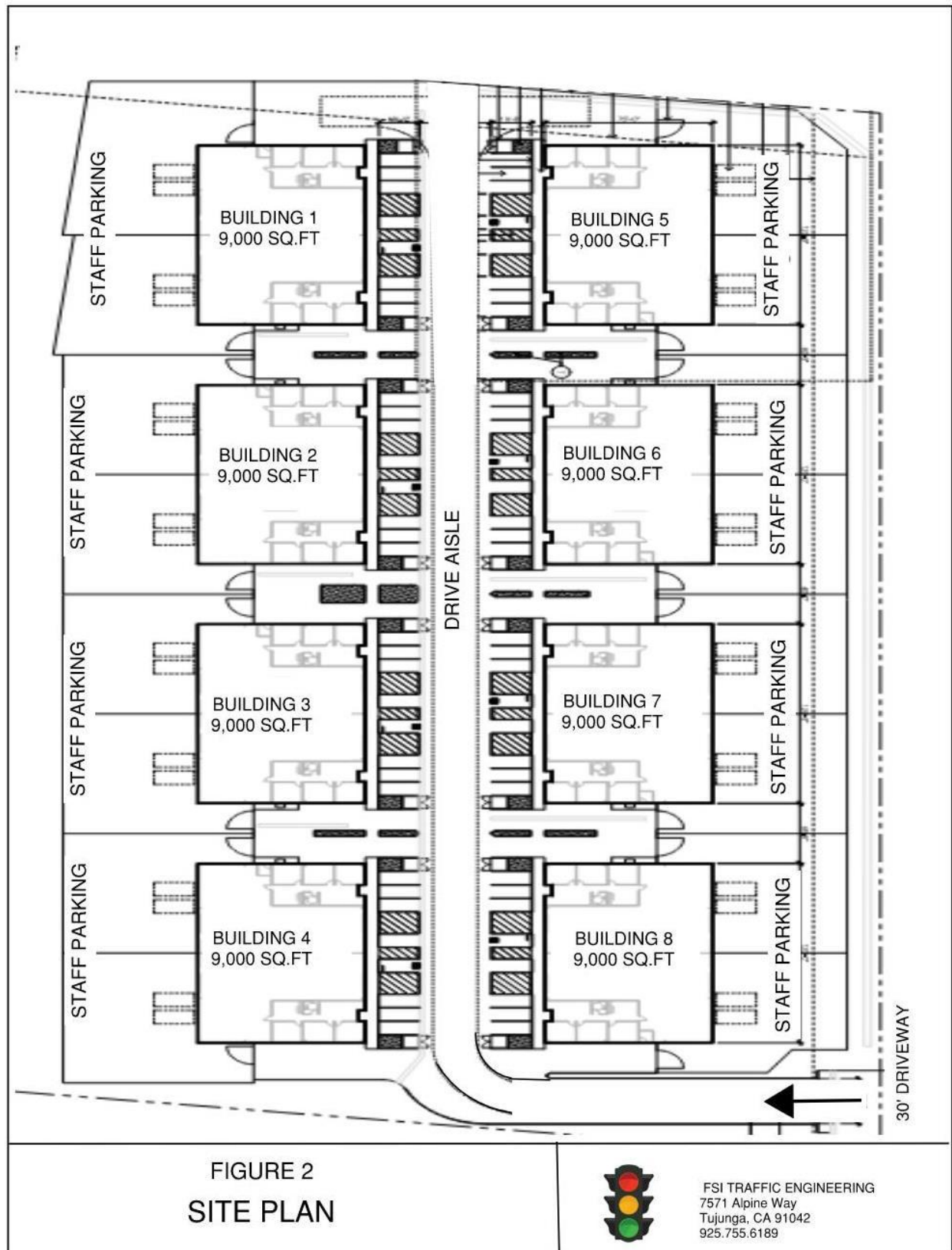
Based on discussion with the applicant the estimated average number of employees in each unit is between two to three.

The project will construct the extension of Product Drive and Business Drive along the property frontage.

### ***1.3 Site Access***

Access to the Site is via a 30 feet-wide existing driveway off Business Drive creating the fourth leg of the Business Drive and Product drive intersection. This driveway is a full access driveway that allows for all movements. Figure 2 present site plan and access point.

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***1.4 Study Area***

Based on the project trips distribution and the County Threshold of 10 additional project trips requirement at any intersections for level-of service analysis, and consultation with the county staff the following intersections will be analyzed:

1. S. Shingle/Ponderosa Road and US 50 W/B off ramp
2. S. Shingle Road and US 50 E/B on and off ramp/Mother Lode
3. Durock Road and S. Shingle Road
4. Product Drive and Durock Road
5. Business Drive and Durock Road
6. Business Drive and Product Drive
7. Cameron Park Drive and Coach Lane
8. US 50 E/B off and on ramp and Cameron Park Drive
9. US 50 W/B off ramp/Country Club Road and Cameron Park Drive

***1.5 Study Methodology***

This Traffic Impact Study was prepared based on the protocols and procedures included in the El Dorado County “Transportation Impact Study Guidelines” dated November 2014.

Traffic conditions were analyzed for the weekdays AM (6 to 9) and PM (4 to 7) peak hours. For the Following scenarios as approved by the County Staff:

1. Existing Conditions- this scenario evaluates the intersection operational Level of Service (LOS) under existing traffic volumes.
2. Existing Plus Project Conditions-this scenario evaluates intersection operational LOS after adding the project trips to the existing conditions.

***1.6 Analysis Methodology***

The *Highway Capacity Manual 6<sup>th</sup> Edition (HCM)* methodology in *Synchro II* software was utilized to evaluate the operations at the study intersections. The procedures contained in the HCM published by the Transportation Research Board, are based upon determining the average total delay for drivers at an intersection. In these intersection analyses procedures, the operating conditions are defined in terms of Level of Service (LOS) which are associated with seconds of delay. For unsignalized intersections, LOS is based on the worst delay occurring at any intersection movement.

The Level of Service is described as letter grades “A” through “F”. Table 1 Describes the six grades of Level of Service.



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**Table 1: Level of Service Description**

<b>LOS</b>	<b>Qualitative Description</b>	<b>Signalized Intersections</b>	<b>Unsignalized Intersections</b>
A	Free-flow travel with an excellent level of comfort and convenience and the freedom to maneuver.	Delay $\leq 10.0$ sec	Delay $\leq 10.0$ sec
B	Stable operating conditions, but the presence of other road users causes a noticeable, though slight, reduction in comfort, convenience, and maneuvering freedom.	Delay $> 10.0$ sec & $\leq 20.0$ sec	Delay $> 10.0$ sec & $\leq 15.0$ sec
C	Stable operating conditions, but the operation of individual users is significantly affected by the interaction with others in the traffic stream.	Delay $> 20.0$ sec & $\leq 35.0$ sec	Delay $> 15.0$ sec & $\leq 25.0$ sec
D	High-density, but stable flow. Users experience severe restriction in speed and freedom to maneuver, with poor levels of comfort and convenience.	Delay $> 35.0$ sec & $\leq 55.0$ sec	Delay $> 25.0$ sec & $\leq 35.0$ sec
E	Operating conditions at or near capacity. Speeds are reduced to a low but relatively uniform value. Freedom to maneuver is difficult with users experiencing frustration and poor comfort and convenience. Unstable operation is frequent, and minor disturbances in traffic flow can cause breakdown conditions.	Delay $> 55.0$ sec & $\leq 80.0$ sec	Delay $> 35.0$ sec & $\leq 50.0$ sec
F	Forced or breakdown conditions. This condition exists wherever the volume of traffic exceeds the capacity of the roadway. Long queues can form behind these bottleneck points with queued traffic traveling in a stop-and-go fashion.	Delay $> 80.0$ sec	Delay $> 50.0$ sec

Source: 2000 & 2010 Highway Capacity Manual, Transportation Research Board.



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## **2.0 EXISTING CONDITIONS**

### ***2.1 Roadway Network***

Regional access to the project site is via US 50. Local access is via S. Shingle Road, Durock Road, Product Drive, Business Drive, and Cameron Park Drive.

- US 50- is a major east-west State Highway located north of the project site. US 50 is the primary transportation facility in El Dorado County connecting the Bay Area to Tahoe Basin Region.
- S. Shingle/Ponderosa Road is a four-lane (two lane in each direction) roadway in the El Dorado County 2035 General plan.
- Durock Road is a major two-lane (one lane in each direction) east-west roadway that connects Cameron park Drive from the north to S. Shingles Road in the east.
- Product Drive is a two-lane (one lane in each direction) northeast-southwest local road that connects Durock Road to serve local properties.
- Business Drive is a two-lane (one lane in each direction) north-south local road that connects Durock Road to serve local properties.
- Cameron Park Drive is a major two-lane (one lane in each direction) north-south roadway that extends from Green Valley Road from north to Durock Road on the south.

### ***2.2 Transit System***

El Dorado County Transit Authority provides public transportation services for the western slope of the County including fixed route, dial-a-ride, and paratransit services to Shingle Spring Community Region. Bus line 40 is a circular line with stops along Durock Road, and Product Drive as shown in Figure 3.

### ***2.3 Bicycle and Pedestrian Facilities***

The existing bicycle and pedestrian facilities are very limited in the El Dorado County. Review of the most recent County Bike and Trail Plan indicates that there are no bike or pedestrian facilities in the vicinity of the Project. Sidewalks are limited. Many of the major roadways do not have continuous sidewalks and bicycle facilities.

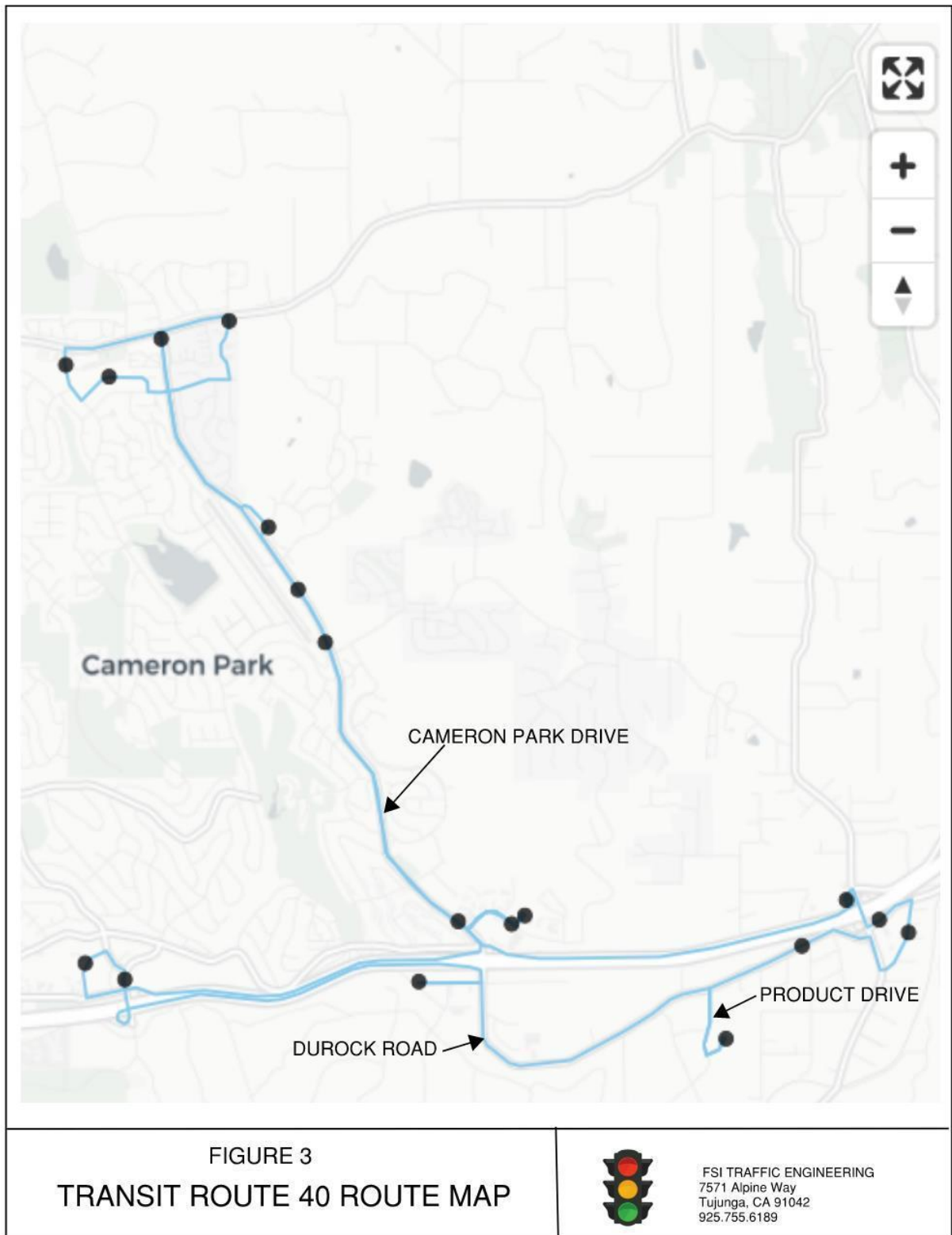
### ***2.4 Existing Lane Configuration***

Figure 4 presents the existing lane configuration and control devices at the study intersections.

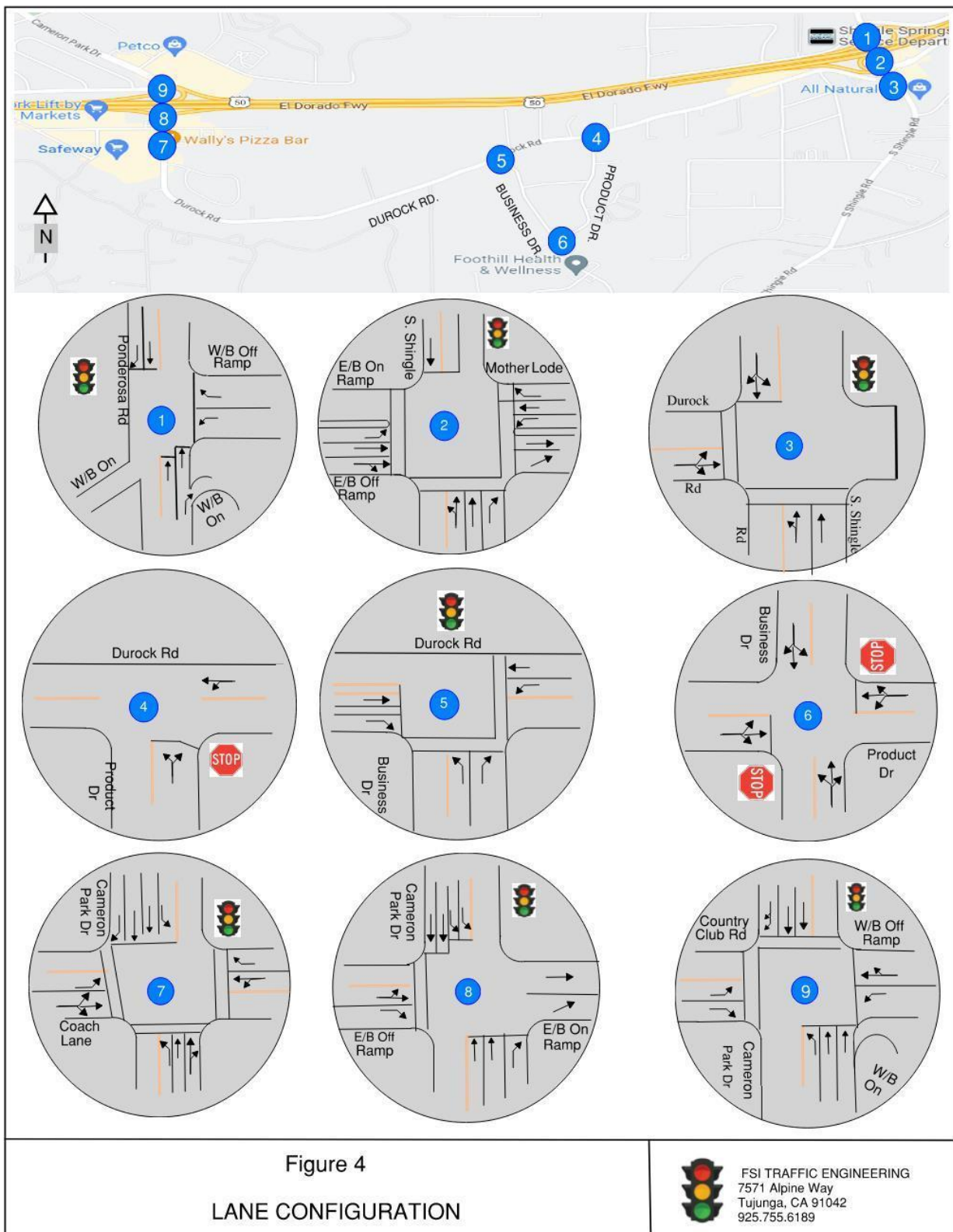
### ***2.5 Data Collection***

Data collection occurred on Thursday, January 12, 2023. Turning movement counts were gathered at the 9 study intersections during the 6:00 – 9:00 AM and 4:00 – 7:00 PM peak periods. Figure 5 presents the peak hours turning movement volumes at the study intersections. Raw count data is included in Appendix A.

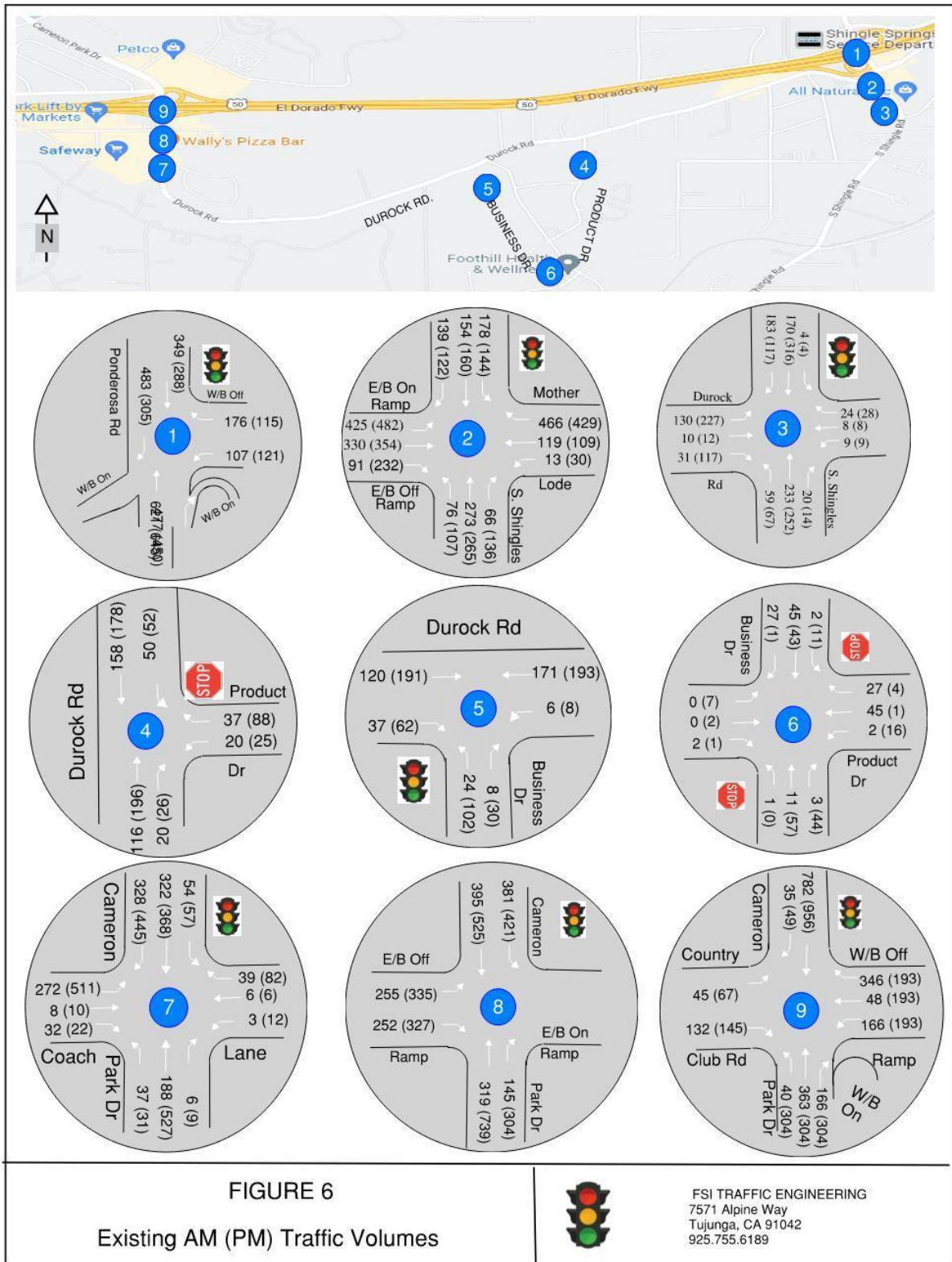
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***2.6 Collision History***

The collision data were collected from Statewide Integrated Traffic Records System (SWITRS) between the year 2018, and 2022. Figure 6 depicts the reported collision's approximate locations.

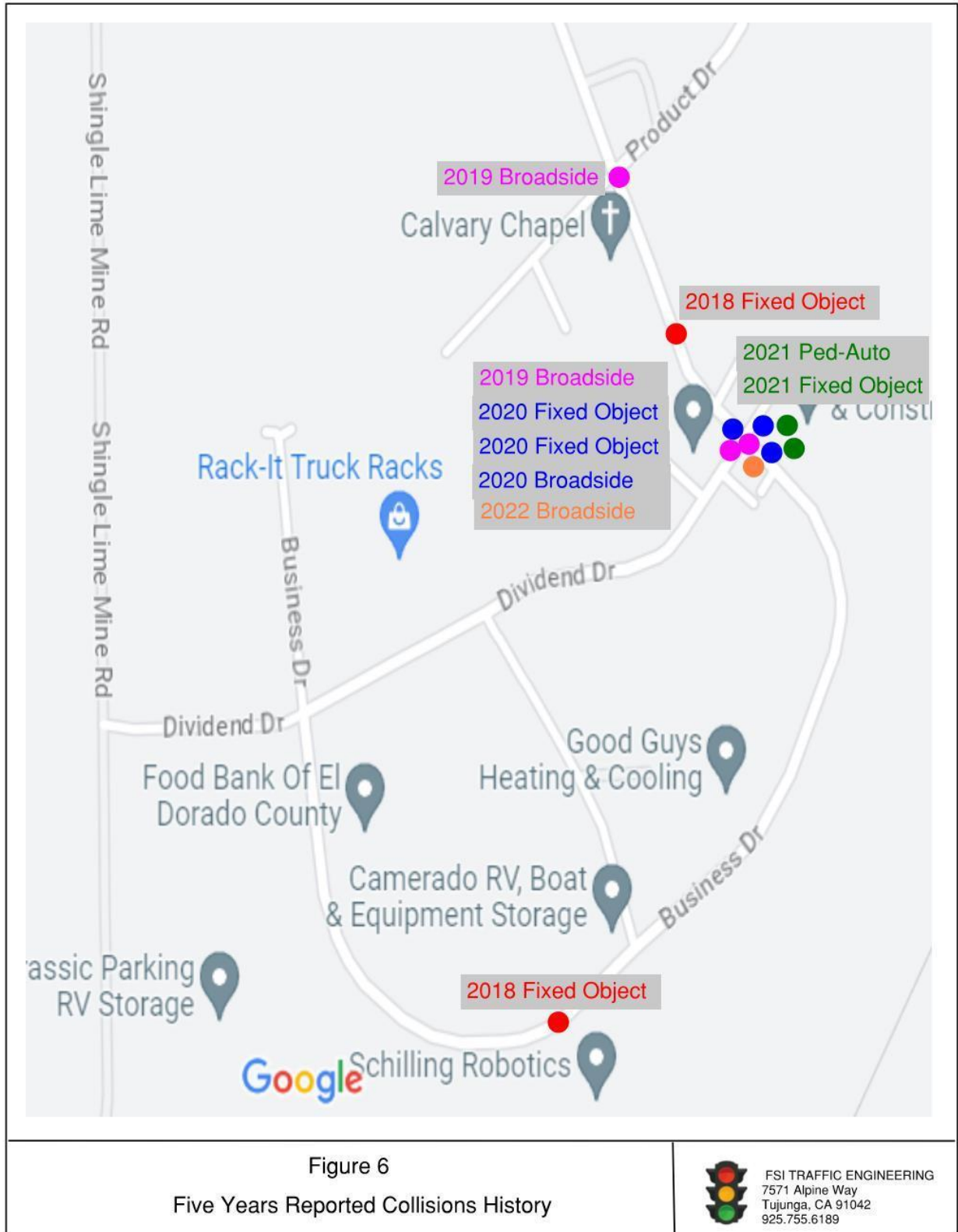
As shown on Figure 6 there were two reported collisions (Fixed Object type) in 2018; three accidents (Broadside) two at intersections of Business Drive at Dividend Drive, and one at intersection of Business Drive and Product Drive in 2019; three collisions (two Fixed Object, and one Broadside) at and vicinity of the intersection of Business Drive and Dividend Drive in 2020; two accidents (one Fixed Object, and one pedestrian with Auto) on Dividend Drive in 2021; and one reported collision (Broadside) at the intersection of Business Drive and Dividend Drive in 2022.

The intersection of Business Drive and Dividend Drive is controlled by a two way stop on Dividend Drive.



Evaluation of the intersection does not indicate any unusual conditions; visibility is not obstructed, and the minor street (Dividend Drive) is stop controlled.

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**2.7 Intersection Level of Service**

Table 2 presents the summary of operational level-of-service at the studied intersection for the existing conditions. Synchro report is included in Appendix B.

**Table 2- Summary of Existing Conditions Level-of-Service (2023)**

INTERSECTION ID./ control	INTERSECTION	PEAK	Existing LOS (Delay in sec.)
1 (Signalized)	Ponderosa Road and US 50 W/B On and Off Ramp	AM	E (71.1)
		PM	E (67.3)
2 (Signalized)	S. Shingle and US 50 E/B On and Off Ramp/Mother Lode	AM	E (76.3)
		PM	F (93.7)
3 (Signalized)	S. Shingles and Durock Road	AM	D (39.2)
		PM	E (77.0)
4 (one-Way Stop)	Durock Road and Product Drive	AM (NB)	A (10.2)
		PM (NB)	B (11.2)
5 (Signalized)	Durock Road and Business Drive	AM	A (6.6)
		PM	B (7.9)
6 (Two-Way Stop)	Business Drive and Product Drive	AM (EB)	A (8.8)
		AM (WB)	A (9.8)
		PM (EB)	A (9.7)
		PM (WB)	A (9.6)
7 (Signalized)	Cameron Park Drive and Coach Lane	AM	C (20.5)
		PM	C (24.0)
8 (Signalized)	Cameron Park Drive and US 50 On and Off Ramp	AM	C (20.5)
		PM	C (22.4)
9 (Signalized)	Cameron Park Drive and US 50 Off Ramp/Country Club	AM	B (18.3)
		PM	C (29.9)

According to the El Dorado County Policy TC-Xd Level of Service (LOS) for County-maintained roads and State Highways within the unincorporated areas of the county shall not be worse than LOS E in the Community Regions or LOS D in the Rural Centers.

The project is located within the established Shingle Spring Community Region and the deficiency Criteria for intersection is LOS E.

As shown in Table 2, all studied Intersections are operating at acceptable LOS “E” or better in the existing conditions, except the intersection of S. Shingle and US 50 Off and On Ramps/Mother Lode, which operates at LOS F during the PM peak hour.

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### **3.0 PROJECT CONDITIONS**

#### ***3.1 Project Description***

The proposed project includes the construction of eight 9,000 individual warehouses/office to be rented to trade professionals such as small contractors, manufacturer. Each unit include approximately 2,200 square feet of office, and 6,800 square feet of warehouse space. The project provides eight standard parking spaces and one handicap parking stall in front of each building and four staff parking spaces at the back of the building on gravel treated area. The number of parking spaces are according to El Dorado County requirements.

Based on discussion with the applicant the estimated average number of employees are between two to three.

#### ***3.2 Site Access***

Access to the Site is via a 30 feet-wide driveway off Business Drive creating the fourth leg of the Business Drive and Product drive intersection. This driveway is a full access driveway that allows for all movements. Figure 2 present site plan and access point.



#### ***3.3 Parking Demand***

The parking on this site plan was developed using the County's guideline of 1 space per 250 square feet of office, and one space per 2,000 square feet of warehouse. Each building includes 6,880 square feet of warehouse and 2,200 square feet of office. The number of parking spaces are according to El Dorado County requirements. Based on the intended use the number of parking is more than adequate to serve the site.



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### ***3.4 Truck Circulation***

The proposed project will generate less than 10 truck trips per day.

### ***3.5 Trip Generation***

Trip generation for the project was estimated using ITE Trip Generation Manual, 11<sup>th</sup> edition. Land use category 130 “Industrial Park”, the County Department of Transportation Staff provided the trip generation shown on Table 3.

**Table 3- Project Trip Generation Estimation**

ITE Trip Generation Manual Trip Generation Period (130 Industrial Park)	ITE Trip Generation Rate per KSF GFA	KSF of Facility	Trips	Threshold Policy TC-Xe
daily	3.37	72	242.6	100
a.m. peak hour	0.34	72	24.5	10
p.m. peak hour	0.34	72	24.5	10

As shown on Table 3 project will generate 243 daily two-way trips, 25 two-way trips during AM peak, and 25 two-way trips during PM peak hours.

### ***3.6 Trip Distributions***

The County Department of Transportation staff assigned the following trip distribution percentages at the intersection of Business Drive and Product Drive:

- 50% trips on Product Drive
- 50% trips on Business Drive

Project trips are distributed to the roadway network based on the existing traffic pattern and turning movements at the studied intersections.

Figure 7 presents project trip distribution percentages through the roadway network based on the above distribution percentages. Figure 7 shows the project trip assignments to the study area intersections.

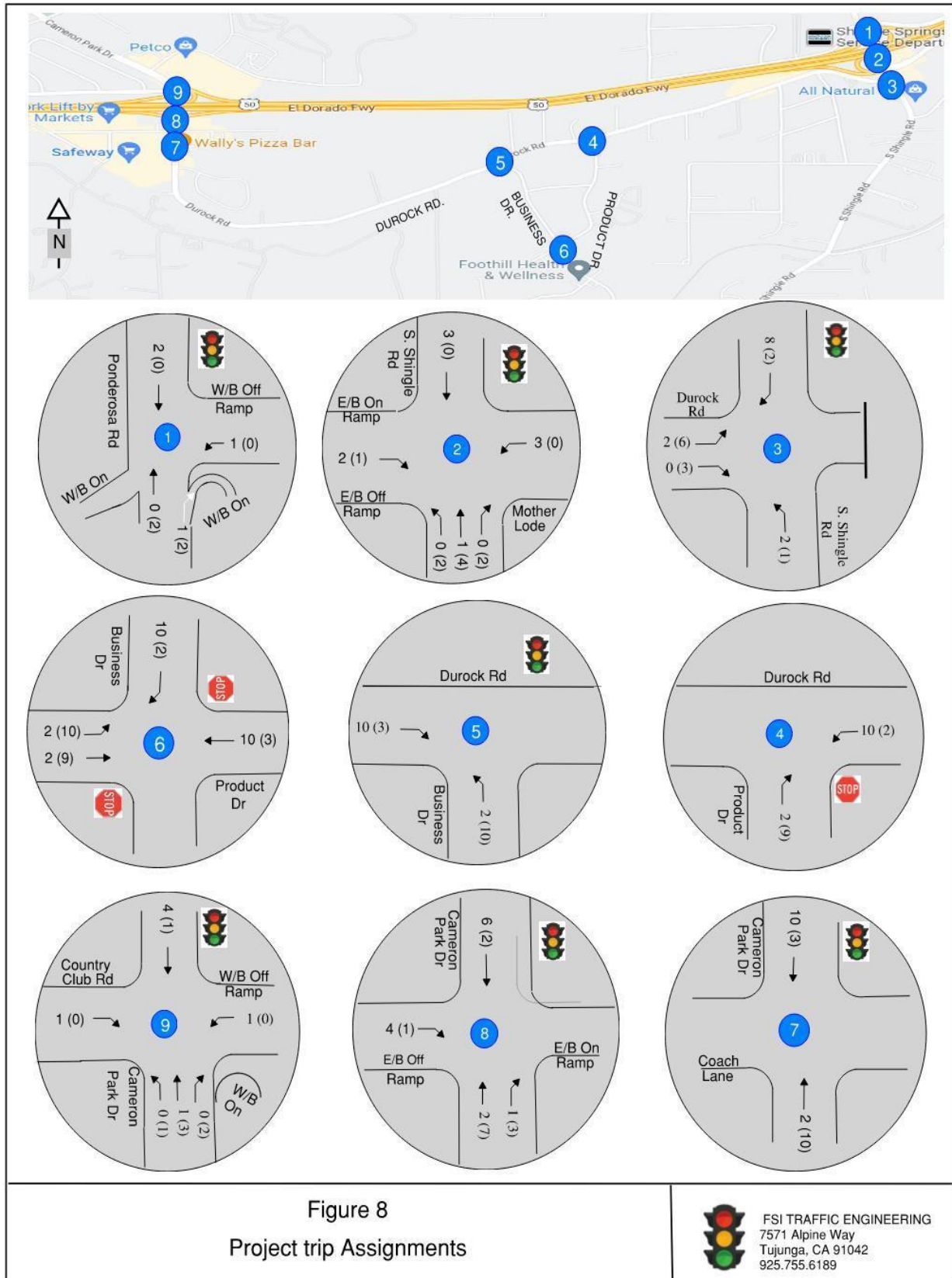
Based on the County Threshold of 10 additional project trips requirement for intersection level-of-service analysis, we propose to analyze the operational level-of-service at nine intersections:

1. S. Shingles/Ponderosa Road and US 50 W/B off ramp
2. S. Shingles Road and US 50 E/B on and off ramp/Mother Lode
3. Durock Road and S. Shingles Road
4. Product Drive and Durock Road
5. Business Drive and Durock Road
6. Business Drive and Product Drive
7. Cameron Park Drive and Coach Lane
8. US 50 E/B off and on ramp and Cameron Park Drive
9. US 50 W/B off ramp/Country Club Road and Cameron Park Drive

### ***3.6 Project Trip Assignment***

Project trips were assigned to the studied intersection based on the above distribution percentages. Figure 8 presents the trip assignments to the intersections.

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#### **4.0 EXISTING PLUS PROJECT CONDITIONS**

This scenario evaluates the operational level of service after adding the project trips to the existing conditions. Figure 8 illustrates the existing plus project traffic volumes at the studied intersections.

##### ***4.1 Intersection Level-of-Service***

Table 5 presents the summary of operational level-of-service at the studied intersection for the existing plus project conditions.

As shown in Table 5, all studied Intersections are operating at acceptable LOS “E” or better in the existing plus project conditions.

According to the El Dorado County Policy TC-Xd Level of Service (LOS) for County-maintained roads and State Highways within the unincorporated areas of the county shall not be worse than LOS E in the Community Regions or LOS D in the Rural Centers.

If any County Road or State Highway fails to meet the above listed county standards for peak hour LOS or volume/capacity ratios without the proposed project, and the project will worsen conditions on the road or highway, then the impact shall be considered significant. The term, worsen is defined for the purpose of this paragraph according to General Plan Policy TC-Xe as follows:

1. A 2 percent increase in traffic during the AM peak hour, PM peak hour or Daily, or
2. The addition of 100 or more daily trips, or
3. The addition of 10 or more trips during AM peak hour, PM peak hour

The project is located within the established Shingle Springs Community Region and the Significant Criteria for intersection impact is LOS E. Any degradation of LOS below LOS E is considered a significant impact.

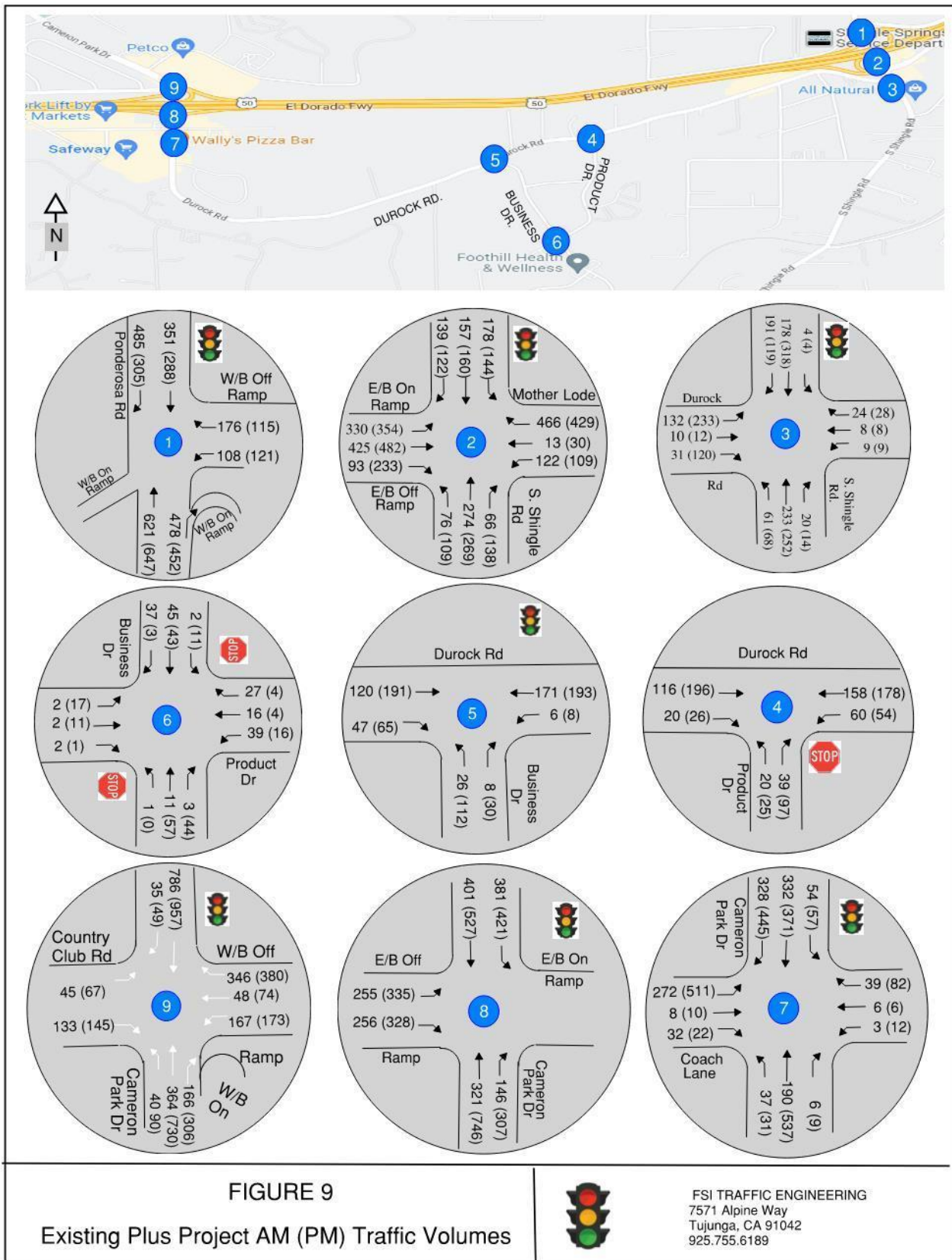
If any County Road or State Highway fails to meet the above listed county standards for peak hour LOS or volume/capacity ratios without the proposed project, and the project will worsen conditions on the road or highway, then the impact shall be considered significant. The term, worsen is defined for the purpose of this paragraph according to General Plan Policy TC-Xe as follows:

1. A 2 percent increase in traffic during the AM peak hour, PM peak hour or Daily, or
2. The addition of 100 or more daily trips, or
3. The addition of 10 or more trips during AM peak hour, PM peak hour

##### ***4.2 Queuing Analysis at the Caltrans Ramps***

As shown in Figure 8 the project will add a small number of trips (max. 4/hour) to the US 50 Ramps and is not expected to significantly add to the off-ramp queue.

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**Table 4- Summary of Comparison Between Existing and Existing Plus Project Level-of-Service (2023)**

INTERSECTION ID/ control	INTERSECTION	PEAK	Existing LOS (Delay in sec.)	Existing Plus Project LOS (Delay in sec.)	Significant Impact
1 (Signalized)	Ponderosa Road and US 50 W/B On and Off Ramp	AM	E (71.1)	E (78.2)	No
		PM	E (67.3)	E (67.3)	No
2 (Signalized)	S. Shingle and US 50 E/B on and Off ramp/Mother Lode	AM	E (76.3)	E (77.0)	No
		PM	F (93.7)	F (93.7)	No
3 (Signalized)	S. Shingles and Durock Road	AM	D (39.2)	D (39.2)	No
		PM	E (77.0)	E (77.0)	No
4 (one-Way Stop)	Durock Road and Product Drive	AM (NB)	A (10.2)	B (10.3)	No
		PM (NB)	B (11.2)	B (11.2)	No
5 (Signalized)	Durock Road and Business Drive	AM	A (6.6)	A (4.8)	No
		PM	B (7.9)	A (7.9)	No
6 (Two-Way Stop)	Business Drive and Product Drive	AM (EB)	A (8.8)	A (9.8)	No
		AM (WB)	A (9.8)	B (10.4)	No
		PM (EB)	A (9.7)	B (11.5)	No
		PM (WB)	A (9.6)	B (10.6)	No
7 (Signalized)	Cameron Park Drive and Coach Lane	AM	C (20.5)	C (20.5)	No
		PM	C (24.0)	C (24.0)	No
8 (Signalized)	Cameron Park Drive and US 50 On and Off Ramp	AM	C (20.5)	C (20.5)	No
		PM	C (22.4)	C (22.4)	No
9 (Signalized)	Cameron Park Drive and US 50 Off Ramp/Country Club	AM	B (18.3)	B (18.4)	No
		PM	C (29.9)	C (29.9)	No

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Table 5 indicates that all study intersections continue to operate at LOS “E” or better for both periods AM and PM except for the intersection of S. Shingle Spring at US 50 Off and On ramps/Mother Lode that was operating at LOS “F” at the existing conditions and continue to operate at LOS “F” with the additions of the project trips.

Based on the County Threshold of addition of ten trips to an intersection that does not meet the level of service, the intersection does not meet the County minimum requirements. the project deficiency at the intersection of S. Shingle Spring at US 50 Off and On ramps/Mother Lode is considered unacceptable.

Deficiency #1

The project impact is considered significant at the intersection of S. Shingle Spring and US 50 off and on ramp/ Mother Lode, because the intersection LOS is below the County standard threshold of LOS “E” and project adds more than 10 trips to the intersection during pm peak.

Improvement #1

Completion of planned US 50/Ponderosa/S. Shingle Road Interchange, Project No. 36104010, and US 50/ Ponderosa/Durock Road realignment, project No. 36104008, provides capacity improvements to the interchange. These projects are included in the County's 20-year Capital Improvement Program (CIP) and would improve the operations at its all intersections along S. Shingle Road/Ponderosa/ Durock/ US 50 interchange. The exhibits on the following pages are excerpts from 2022 El Dorado County CIP document.

With the improvements described above the operational level of service will be improved to an acceptable level.



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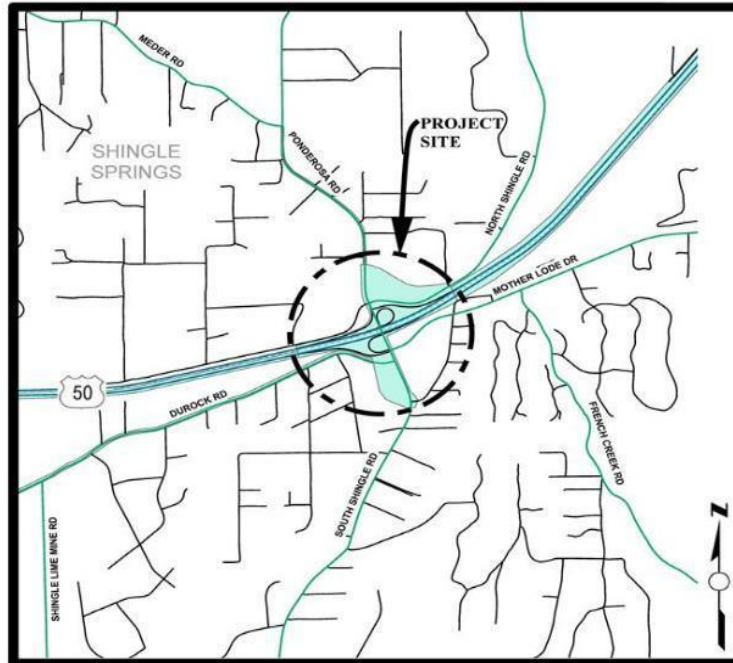
**US 50 / Ponderosa Road / South Shingle Road Interchange  
Improvements**

**CIP Project Summary**

**Project No: 36104010**

**Type: Interchange**

**Supervisor District(s) 4**



**LOCATION MAP**

NOT TO SCALE

**Project Description:**

Project provides capacity improvements to the interchange, includes a detailed study to identify a preferred alternative. This phase of the project includes the widening of the existing US 50 overcrossing to accommodate five lanes and the realignment of the westbound on-ramp and eastbound loop on-ramp, and widenings along Mother Lode Drive and South Shingle Road. Preliminary engineering for all phases (projects 71333/36104010, 71338/36104008 and 71339/36104009) shall be performed under the interchange project. This project requires the construction of US 50 /Ponderosa Road - North Shingle Road Realignment (project 71338/36104008) and US 50 / Ponderosa Road Interchange - Durock Road Realignment (project 71339/36104009). This project shall also be coordinated with US 50 Eastbound Auxiliary Lanes - Cameron Park Interchange to Ponderosa Road Interchange (53127/36104020), and US 50 Westbound Auxiliary Lanes - Ponderosa Road Interchange to Cameron Park Drive Interchange (53128/36104024).

Project Initiation Date: 2/13/2007

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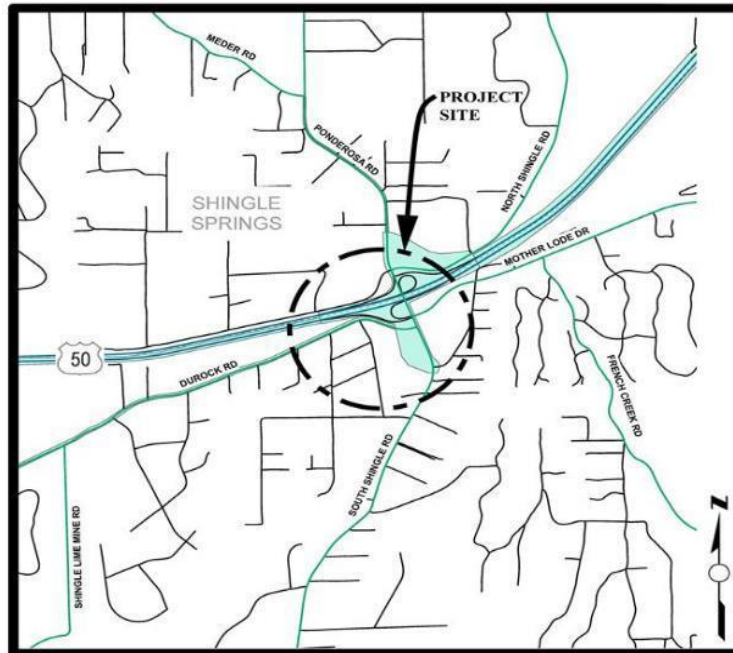
**US 50 / Ponderosa Road Interchange - Durock Road  
Realignment**

**CIP Project Summary**

**Project No: 36104008**

**Type: Interchange**

**Supervisor District(s) 2**



**LOCATION MAP**

NOT TO SCALE

**Project Description:**

This project includes realignment of approximately 1/4 mile of Durock Road to South Shingle Road/Sunset Lane and potential widening of the eastbound off ramp. This project is part of a larger project, US 50/Ponderosa Road/South Shingle Road interchange (project 71333/36104010). Preliminary engineering shall be performed under the interchange project. Work needs to be coordinated with US 50/Ponderosa Road/South Shingle Road Interchange (project 71333/36104010), US 50/Ponderosa Road Interchange - N. Shingle Road Realignment (project 71339/36104009) and US 50 Eastbound Auxiliary Lane from Cameron Park Drive Interchange to Ponderosa Road Interchange (53127/36104020).

Project Initiation Date: 2/11/2008



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**5.0- CEQA TRANSPORTATION ANALYSIS (VMT)**

***5.1- Background***

The State of California Governor's Office of Planning and Research (OPR) issued proposed updates to the CEQA guidelines in November 2017 and an accompanying technical advisory guidance finalized in December 2018 (OPR Technical Advisory) that amends the Appendix G question for transportation impacts to delete reference to vehicle delay and level of service and instead refer to Section 15064.3, subdivision (b)(1) of the CEQA Guidelines asking if the project will result in a substantial increase in vehicle miles traveled (VMT).

Accordingly, for the purpose of environmental review under CEQA, El Dorado County adopted Resolution 141-2020 which sets thresholds of significance for *land use* projects.

According to the adopted Resolution:

1. "The Board finds that these thresholds set the identifiable metric by which a project's effect on VMT will normally be determined significant by the agency and compliance with which means the effect normally will be determined to be less than significant. When using these thresholds, the environmental document "should briefly explain how compliance with the threshold means the project's impacts are less than significant," as required by CEQA Guidelines section 15064."
2. "The adoption of new CEQA thresholds of significance for transportation impacts is consistent with the goals and policies within the El Dorado County General Plan that are supportive of reducing VMT. Specifically, as described in Attachment A to this resolution, there are thirteen Land Use Element policies, sixteen Transportation and Circulation Element policies, and eight Public Health, Safety, and Noise Element policies that are supportive of VMT mitigation measures."
3. "The County shall generally use the El Dorado County Travel Demand Model for establishing the baseline VMT for the unincorporated County as a whole and calculating the VMT for specific projects in order to apply the significance thresholds and screening tools adopted herein. **However, a different method of calculating VMT may be used if, in the exercise of sound engineering judgment, a different method is determined to be more accurate because the unique circumstances of a particular project or particular use that are not captured in the El Dorado County Travel Demand Model result in an underestimation or overestimation of VMT. Any such deviations in calculating VMT shall be explained in the written analysis relied on in the environmental analysis for CEQA.**"
4. The County shall use the Countywide VMT average as the measure of transportation impacts for CEQA compliance.
5. There is a presumption of less than significant impacts for:
  - a. Projects that generate or attract less than 100 trips per day, consistent with OPR's

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determination of projects that generate or attract fewer than 110 trips per day and further reduced to 100 to remain consistent with the existing threshold in General Plan Policy TCXe.

- b. Projects that are within 1/2 mile of either a major transit stop, as defined in Public Resources Code Section 21064.3, or a high-quality transit corridor, as defined in Public Resources Section 21155. Consistent with CEQA Guidelines section 15064.3(b)(1) and OPR's conclusions in its Technical Advisory; and
  - c. 100% affordable residential development, including moderate, low, and very low categories as defined in the Regional Housing Needs Assessment (RHNA), consistent with OPR's conclusions in its Technical Advisory.
6. The County shall apply the significant threshold of 15%, as recommended by OPR's Technical Advisory, below baseline for residential and office land use and no net increase for retail projects. Consistent with OPR's Technical Advisory, the Board finds that a proposed project exceeding a level of 15 percent below the existing VMT per capita may indicate a significant transportation impact.

Based on the criteria listed in Resolution 141-2020 the project does not meet the screening criteria. The following paragraph describes the methodology used to determine that the project reduces the overall VMT within the El Dorado County.

### ***5.2- Project Setting***

Based on the review of Resolution 141-2020, the County General Plan Policy does not clearly define the thresholds for industrial and business park developments. The mentioned policies are for residential, commercial, mixed-use developments. As noted on Item 3 of the adopted Resolution cited above, this study will evaluate the VMT based on other methods to show that the project will reduce the overall VMT within the region. The Project is located within the Traffic Analysis Zone (TAZ) 257 with corresponding 22.3 VMT per service population.



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***5.3- Project Description***

The proposed project has a unique development, it will house small professional and trade contractors and manufacturers. The project is located within Barnett business park in the Shingle Springs Community Region. The development is consistent with the general plan and is the only development providing the small units to be rented to trade contractors and manufacturers within the Barnett Business Park. There is no other comparable development in the El Dorado County.

The project includes the construction of eight-9,000 square feet of individual warehouses/office. Each unit will be rented to one or two professional trade users such as small contractors or manufacturers. Each unit include approximately 2,200 square feet of office, and 6,800 square feet of warehouse space. The project provides eight standard parking spaces (based on the El Dorado County Parking code requirements) and one handicap parking stall in front of each building and four staff parking spaces at the back of the building on gravel treated area.

Based on the search of the existing industrial park, warehouse, and office within Sacramento and El Dorado Counties, it appears that there are very few comparable industrial parks for rent in Sacramento County and one (Bort Springs Industrial Park) in the City of Placerville in El Dorado County. Figure 10 presents a few of the comparable industrial parks to the west of El Dorado County.

As shown in Figure 10, there is a large area within the El Dorado County that does not provide an industrial park developments. There are six similar industrial park within sacramento and Folsom region and one in Placerville (Bort Springs Industrial Park), there are no other in kind industrial/warehouse development from Folsom to the east in El Dorado County. The Granade Industrial park is providing an opprtunity for the small contractors and manufacturers in El Dorado County to house their business within the County.

To determine the regional VMT reduction, the study assumed Erickson Industrial Park as the centroid for all Industrial park in Sacramento. The new centroid was assumed when considering the Bort Springs Industrial Park, this new centroid is located at Prairie City Road in Folsom. The study assumes the centroid between the propsed Granade Industrial and Bort Springs Industrial Park is located half a distance from either Industrial parks and located at Greenstone Road.

As shown in Figure 10, the one-way average distance from the existing centroid at Prairie Road to El Dorado County centroid at Pollock Pines is 37 miles and the average one-way distance between the centroid for the two industrial park in El Dorado County at Greenstone Road and the centroid of El Dorado County at Pollock Pines is 19 miles. The reduction in travel distance (37 miles vs. 19 one-way miles) is a significant reduction in travel distance and therefore it would reduce the overall VMT per service population within the El Dorado County.

***5.4- Conclusion***

Based on the above information the proposed project is assumed to have less than significant VMT impact.



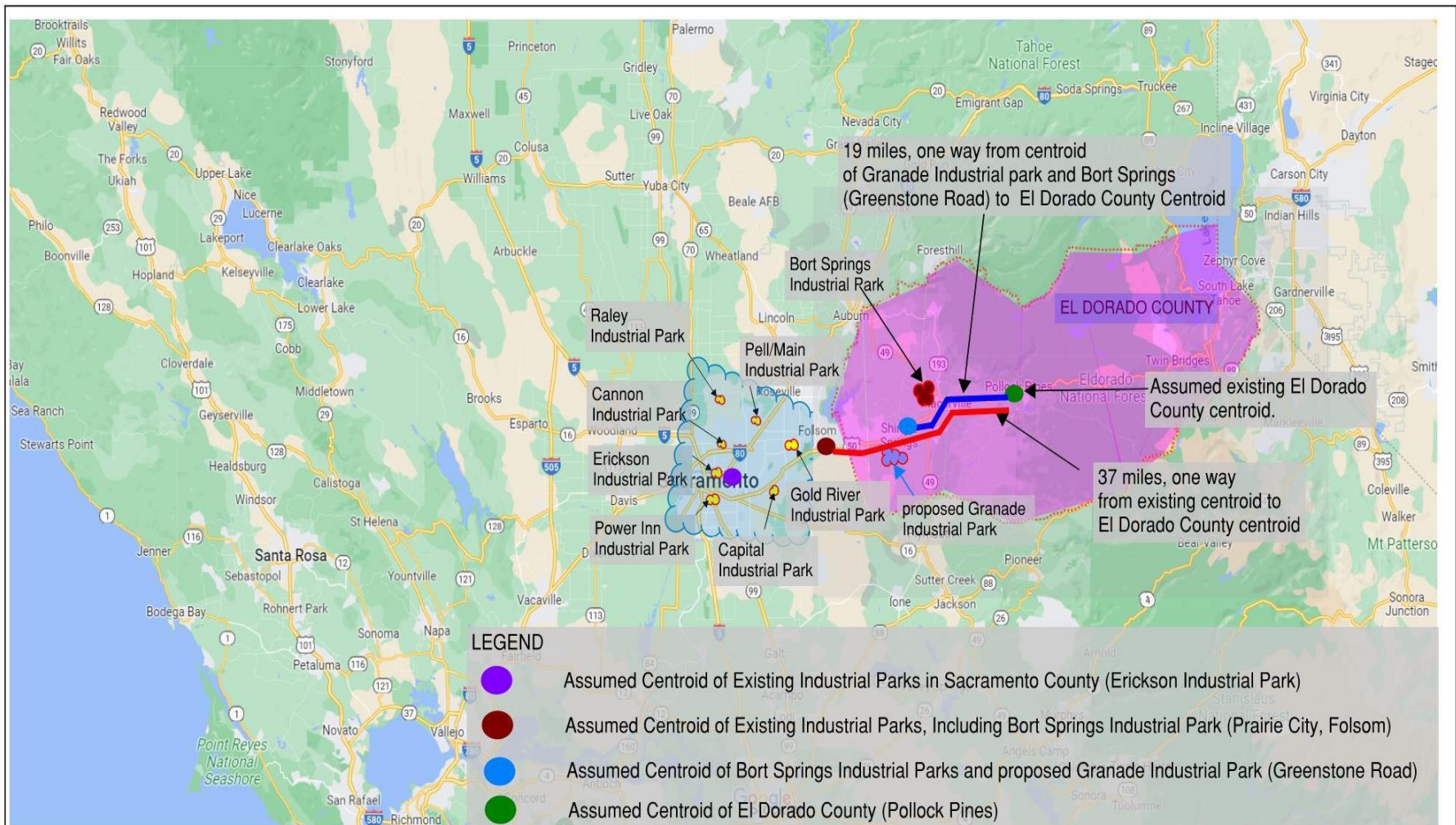


FIGURE 10

COMPARISON OF TRAVEL DISTANCE WITH AND WITHOUT PROPOSED PROJECT



FSI TRAFFIC ENGINEERING  
7571 Alpine Way  
Tujunga, CA 91042  
925.755.6189

**Appendix A  
Traffic Volume Raw Data**

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**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951)268-6268

County of El Dorado  
 N/S: Ponderosa Road/S Shingle Road  
 E/W: US-50 Westbound Ramps  
 Weather: Clear

File Name : 05\_CED\_Pon\_50W AM  
 Site Code : 99923038  
 Start Date : 1/12/2023  
 Page No : 1

Groups Printed- Total Volume

	Ponderosa Road Southbound				US-50 Westbound Ramps Westbound				S Shingle Road Northbound				US-50 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	18	54	72	12	0	4	16	0	28	54	82	0	0	0	0	170
06:15 AM	0	17	48	65	16	0	6	22	0	35	65	100	0	0	0	0	187
06:30 AM	0	35	78	113	22	0	12	34	0	36	82	118	0	0	0	0	265
06:45 AM	0	28	64	92	22	0	16	38	0	27	86	113	0	0	0	0	243
Total	0	98	244	342	72	0	38	110	0	126	287	413	0	0	0	0	865
07:00 AM	0	28	72	100	17	0	14	31	0	40	83	123	0	0	0	0	254
07:15 AM	0	39	108	147	17	0	22	39	0	83	135	218	0	0	0	0	404
07:30 AM	0	51	103	154	27	0	22	49	0	110	157	267	0	0	0	0	470
07:45 AM	0	100	129	229	32	0	47	79	0	159	106	265	0	0	0	0	573
Total	0	218	412	630	93	0	105	198	0	392	481	873	0	0	0	0	1701
08:00 AM	0	96	102	198	24	0	47	71	0	216	92	308	0	0	0	0	577
08:15 AM	0	102	149	251	24	0	60	84	0	136	122	258	0	0	0	0	593
08:30 AM	0	70	89	159	22	0	34	56	0	97	134	231	0	0	0	0	446
08:45 AM	0	76	96	172	32	0	53	85	0	125	107	232	0	0	0	0	489
Total	0	344	436	780	102	0	194	296	0	574	455	1029	0	0	0	0	2105
Grand Total	0	660	1092	1752	267	0	337	604	0	1092	1223	2315	0	0	0	0	4671
Apprch %	0	37.7	62.3		44.2	0	55.8		0	47.2	52.8		0	0	0		
Total %	0	14.1	23.4	37.5	5.7	0	7.2	12.9	0	23.4	26.2	49.6	0	0	0	0	

	Ponderosa Road Southbound				US-50 Westbound Ramps Westbound				S Shingle Road Northbound				US-50 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	51	103	154	27	0	22	49	0	110	<b>157</b>	267	0	0	0	0	470
07:45 AM	0	100	129	229	<b>32</b>	0	47	79	0	159	106	265	0	0	0	0	573
08:00 AM	0	96	102	198	24	0	47	71	0	<b>216</b>	92	<b>308</b>	0	0	0	0	577
08:15 AM	0	<b>102</b>	<b>149</b>	<b>251</b>	24	0	<b>60</b>	<b>84</b>	0	136	122	258	0	0	0	0	<b>593</b>
Total Volume	0	349	483	832	107	0	176	283	0	621	477	1098	0	0	0	0	2213
% App. Total	0	41.9	58.1		37.8	0	62.2		0	56.6	43.4		0	0	0		
PHF	.000	.855	.810	.829	.836	.000	.733	.842	.000	.719	.760	.891	.000	.000	.000	.000	.933



# DR22-0009 GRANADE BUSINESS PROPERTIES, LLC

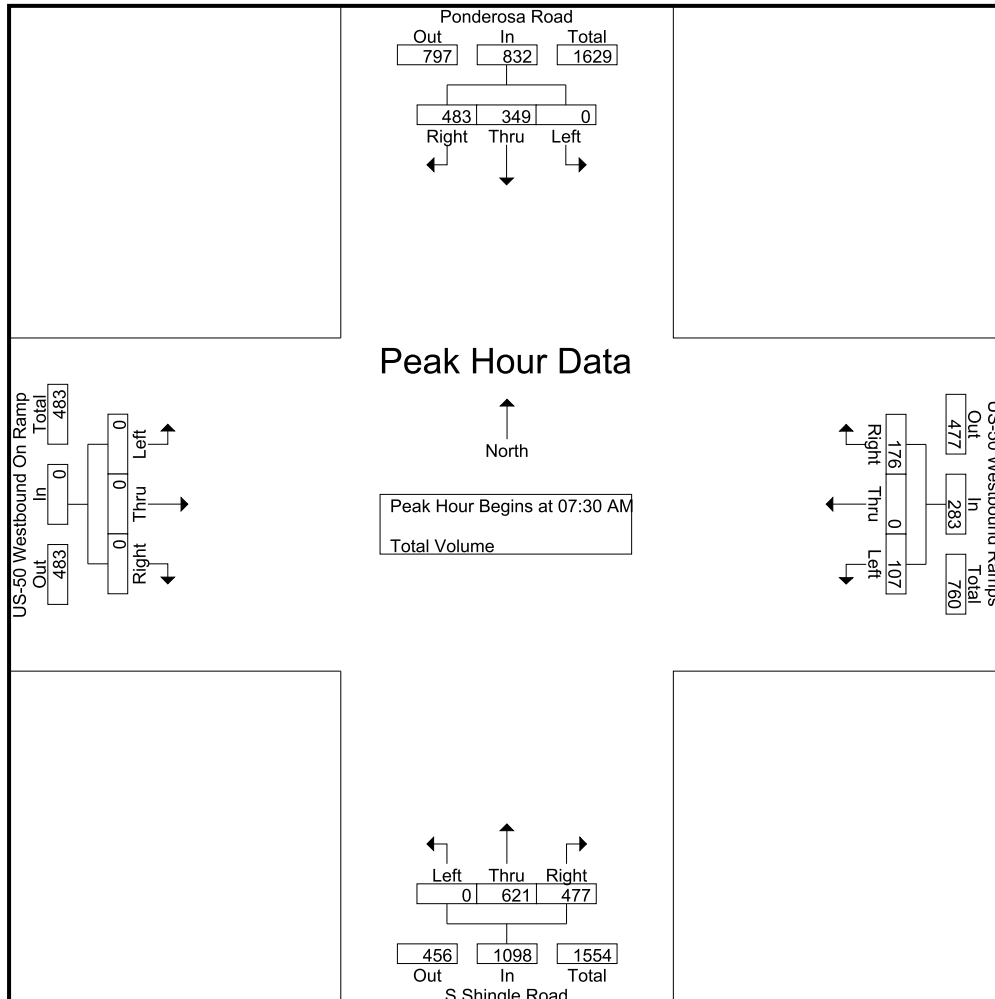
## OFFICE/WAREHOUSE BUILDINGS

### ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT

Counts Unlimited, Inc.  
PO Box 1178  
Corona, CA 92878  
(951)268-6268

County of El Dorado  
N/S: Ponderosa Road/S Shingle Road  
E/W: US-50 Westbound Ramps  
Weather: Clear

File Name : 05\_CED\_Pon\_50W AM  
Site Code : 99923038  
Start Date : 1/12/2023  
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:45 AM				08:00 AM				07:30 AM				06:00 AM			
+0 mins.	0	100	129	229	24	0	47	71	0	110	157	267	0	0	0	0
+15 mins.	0	96	102	198	24	0	60	84	0	159	106	265	0	0	0	0
+30 mins.	0	102	149	251	22	0	34	56	0	216	92	308	0	0	0	0
+45 mins.	0	70	89	159	32	0	53	85	0	136	122	258	0	0	0	0
Total Volume	0	368	469	837	102	0	194	296	0	621	477	1098	0	0	0	0
% App. Total	0	44	56		34.5	0	65.5		0	56.6	43.4		0	0	0	
PHF	.000	.902	.787	.834	.797	.000	.808	.871	.000	.719	.760	.891	.000	.000	.000	.000

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County of El Dorado  
 N/S: Ponderosa Road/S Shingle Road  
 E/W: US-50 Westbound Ramps  
 Weather: Clear

File Name : 05\_CED\_Pon\_50W PM  
 Site Code : 99923038  
 Start Date : 1/12/2023  
 Page No : 1

Groups Printed- Total Volume

	Ponderosa Road Southbound				US-50 Westbound Ramps Westbound				S Shingle Road Northbound				US-50 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	81	76	157	25	0	37	62	0	141	108	249	0	0	0	0	468
04:15 PM	0	66	56	122	24	0	41	65	1	120	119	240	0	0	0	0	427
04:30 PM	0	64	68	132	34	0	25	59	0	174	127	301	0	0	0	0	492
04:45 PM	0	82	107	189	38	0	33	71	0	149	101	250	0	0	0	0	510
Total	0	293	307	600	121	0	136	257	1	584	455	1040	0	0	0	0	1897
05:00 PM	0	82	65	147	26	1	30	57	0	160	111	271	0	0	0	0	475
05:15 PM	0	60	65	125	23	1	27	51	0	162	111	273	0	0	0	0	449
05:30 PM	0	61	66	127	24	0	27	51	0	124	117	241	0	0	0	0	419
05:45 PM	0	41	67	108	22	0	26	48	0	130	83	213	0	0	0	0	369
Total	0	244	263	507	95	2	110	207	0	576	422	998	0	0	0	0	1712
06:00 PM	0	53	55	108	15	0	23	38	0	131	97	228	0	0	0	0	374
06:15 PM	0	53	51	104	15	0	12	27	0	75	70	145	0	0	0	0	276
06:30 PM	0	35	34	69	11	0	15	26	0	81	54	135	0	0	0	0	230
06:45 PM	0	26	44	70	15	0	14	29	0	87	50	137	0	0	0	0	236
Total	0	167	184	351	56	0	64	120	0	374	271	645	0	0	0	0	1116
Grand Total	0	704	754	1458	272	2	310	584	1	1534	1148	2683	0	0	0	0	4725
Apprch %	0	48.3	51.7		46.6	0.3	53.1		0	57.2	42.8		0	0	0		
Total %	0	14.9	16	30.9	5.8	0	6.6	12.4	0	32.5	24.3	56.8	0	0	0	0	

	Ponderosa Road Southbound				US-50 Westbound Ramps Westbound				S Shingle Road Northbound				US-50 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	64	68	132	34	0	25	59	0	<b>174</b>	<b>127</b>	<b>301</b>	0	0	0	0	492
04:45 PM	0	<b>82</b>	<b>107</b>	<b>189</b>	<b>38</b>	0	<b>33</b>	<b>71</b>	0	149	101	250	0	0	0	0	<b>510</b>
05:00 PM	0	82	65	147	26	1	30	57	0	160	111	271	0	0	0	0	475
05:15 PM	0	60	65	125	23	1	27	51	0	162	111	273	0	0	0	0	449
Total Volume	0	288	305	593	121	2	115	238	0	645	450	1095	0	0	0	0	1926
% App. Total	0	48.6	51.4		50.8	0.8	48.3		0	58.9	41.1		0	0	0		
PHF	.000	.878	.713	.784	.796	.500	.871	.838	.000	.927	.886	.909	.000	.000	.000	.000	.944

# DR22-0009 GRANADE BUSINESS PROPERTIES, LLC

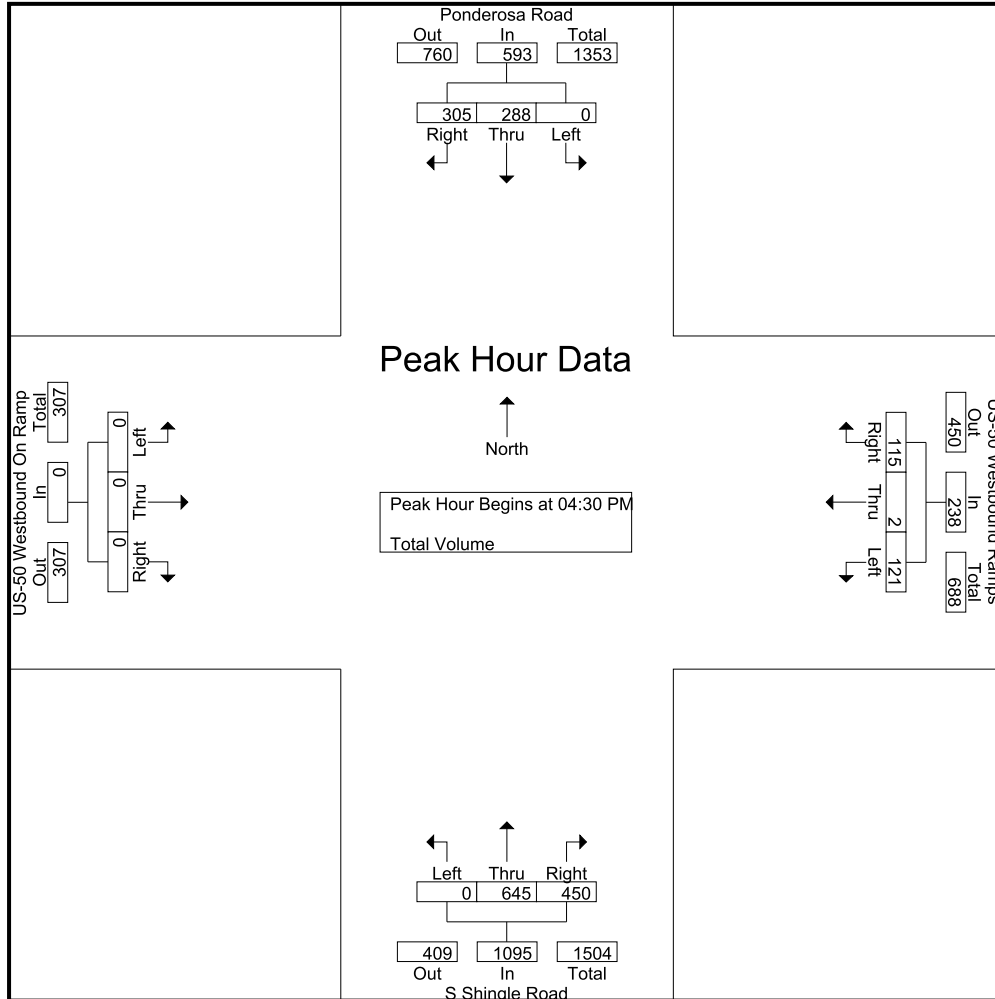
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PO Box 1178  
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County of El Dorado  
N/S: Ponderosa Road/S Shingle Road  
E/W: US-50 Westbound Ramps  
Weather: Clear

File Name : 05\_CED\_Pon\_50W PM  
Site Code : 99923038  
Start Date : 1/12/2023  
Page No : 2



Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:30 PM				04:00 PM			
+0 mins.	0	81	76	157	25	0	37	62	0	<b>174</b>	<b>127</b>	<b>301</b>	0	0	0	0
+15 mins.	0	66	56	122	24	0	<b>41</b>	65	0	149	101	250	0	0	0	0
+30 mins.	0	64	68	132	34	0	25	59	0	160	111	271	0	0	0	0
+45 mins.	0	<b>82</b>	<b>107</b>	<b>189</b>	<b>38</b>	0	33	<b>71</b>	0	162	111	273	0	0	0	0
Total Volume	0	293	307	600	121	0	136	257	0	645	450	1095	0	0	0	0
% App. Total	0	48.8	51.2		47.1	0	52.9		0	58.9	41.1		0	0	0	
PHF	.000	.893	.717	.794	.796	.000	.829	.905	.000	.927	.886	.909	.000	.000	.000	.000

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951)268-6268

County of El Dorado  
 N/S: S Shingle Road  
 E/W: US-50 EB Ramps/Mother Lode Drive  
 Weather: Clear

File Name : 04\_CED\_Shi\_50E AM  
 Site Code : 99923038  
 Start Date : 1/12/2023  
 Page No : 1

Groups Printed- Total Volume

	S Shingle Road Southbound				Mother Lode Drive Westbound				S Shingle Road Northbound				US-50 Eastbound Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	6	17	6	29	10	2	48	60	8	17	2	27	20	21	4	45	161
06:15 AM	13	16	3	32	8	5	52	65	12	17	6	35	19	18	7	44	176
06:30 AM	12	18	11	41	13	2	67	82	8	30	6	44	18	27	6	51	218
06:45 AM	6	39	11	56	22	0	71	93	7	36	7	50	13	21	9	43	242
Total	37	90	31	158	53	9	238	300	35	100	21	156	70	87	26	183	797
07:00 AM	15	21	6	42	20	3	76	99	9	21	8	38	24	28	13	65	244
07:15 AM	11	23	5	39	22	5	92	119	12	48	9	69	48	53	10	111	338
07:30 AM	27	27	18	72	13	5	118	136	19	69	12	100	67	43	24	134	442
07:45 AM	38	34	28	100	27	1	124	152	13	71	15	99	111	96	32	239	590
Total	91	105	57	253	82	14	410	506	53	209	44	306	250	220	79	549	1614
08:00 AM	55	42	36	133	31	7	94	132	20	75	12	107	98	108	17	223	595
08:15 AM	45	42	43	130	24	2	117	143	20	86	22	128	71	122	19	212	613
08:30 AM	40	36	32	108	37	3	131	171	23	41	17	81	50	99	23	172	532
08:45 AM	41	32	26	99	30	4	121	155	15	43	23	81	77	63	28	168	503
Total	181	152	137	470	122	16	463	601	78	245	74	397	296	392	87	775	2243
Grand Total	309	347	225	881	257	39	1111	1407	166	554	139	859	616	699	192	1507	4654
Apprch %	35.1	39.4	25.5		18.3	2.8	79		19.3	64.5	16.2		40.9	46.4	12.7		
Total %	6.6	7.5	4.8	18.9	5.5	0.8	23.9	30.2	3.6	11.9	3	18.5	13.2	15	4.1	32.4	

	S Shingle Road Southbound				Mother Lode Drive Westbound				S Shingle Road Northbound				US-50 Eastbound Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	38	34	28	100	27	1	124	152	13	71	15	99	111	96	32	239	590
08:00 AM	55	42	36	133	31	7	94	132	20	75	12	107	98	108	17	223	595
08:15 AM	45	42	43	130	24	2	117	143	20	86	22	128	71	122	19	212	613
08:30 AM	40	36	32	108	37	3	131	171	23	41	17	81	50	99	23	172	532
Total Volume	178	154	139	471	119	13	466	598	76	273	66	415	330	425	91	846	2330
% App. Total	37.8	32.7	29.5		19.9	2.2	77.9		18.3	65.8	15.9		39	50.2	10.8		
PHF	.809	.917	.808	.885	.804	.464	.889	.874	.826	.794	.750	.811	.743	.871	.711	.885	.950

# DR22-0009 GRANADE BUSINESS PROPERTIES, LLC

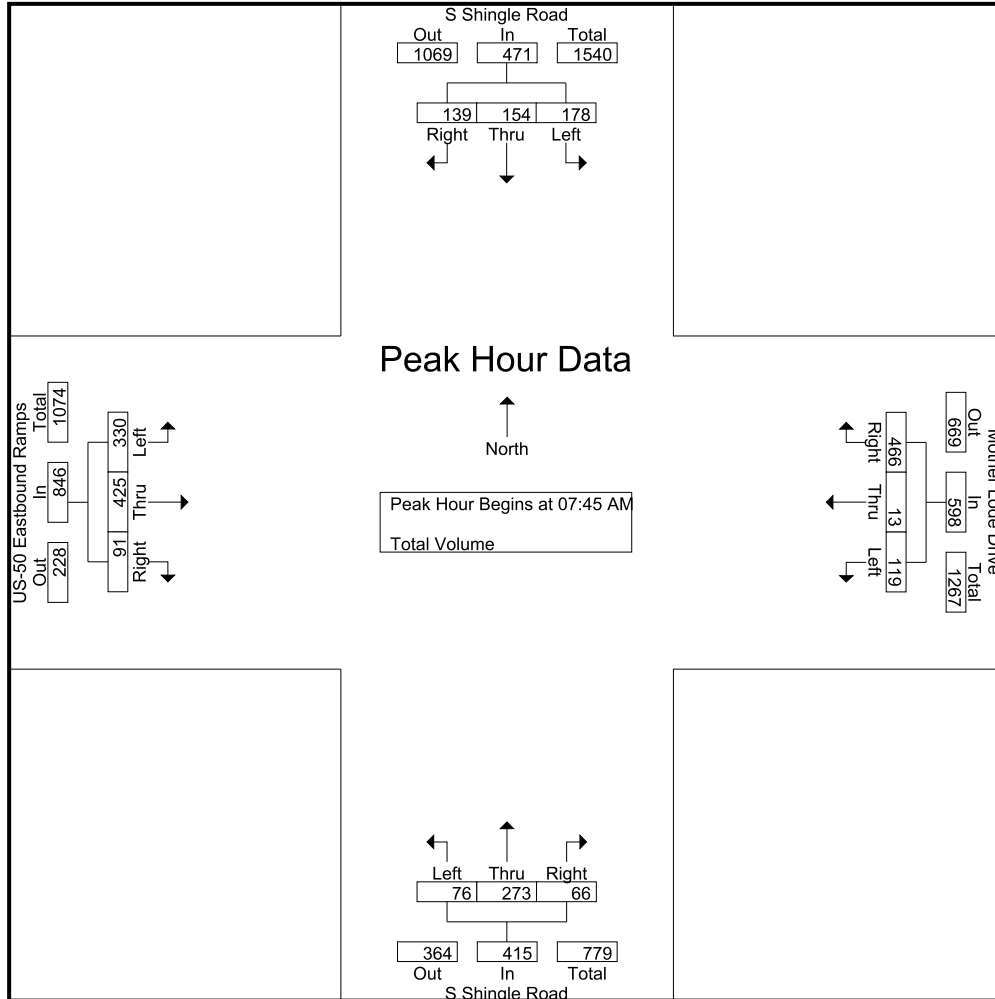
## OFFICE/WAREHOUSE BUILDINGS

### ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT

Counts Unlimited, Inc.  
PO Box 1178  
Corona, CA 92878  
(951)268-6268

County of El Dorado  
N/S: S Shingle Road  
E/W: US-50 EB Ramps/Mother Lode Drive  
Weather: Clear

File Name : 04\_CED\_Shi\_50E AM  
Site Code : 99923038  
Start Date : 1/12/2023  
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

	07:45 AM				08:00 AM				07:30 AM				07:45 AM			
+0 mins.	38	34	28	100	31	7	94	132	19	69	12	100	111	96	32	239
+15 mins.	55	42	36	133	24	2	117	143	13	71	15	99	98	108	17	223
+30 mins.	45	42	43	130	37	3	131	171	20	75	12	107	71	122	19	212
+45 mins.	40	36	32	108	30	4	121	155	20	86	22	128	50	99	23	172
Total Volume	178	154	139	471	122	16	463	601	72	301	61	434	330	425	91	846
% App. Total	37.8	32.7	29.5		20.3	2.7	77		16.6	69.4	14.1		39	50.2	10.8	
PHF	.809	.917	.808	.885	.824	.571	.884	.879	.900	.875	.693	.848	.743	.871	.711	.885

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951)268-6268

County of El Dorado  
 N/S: S Shingle Road  
 E/W: US-50 EB Ramps/Mother Lode Drive  
 Weather: Clear

File Name : 04\_CED\_Shi\_50E PM  
 Site Code : 99923038  
 Start Date : 1/12/2023  
 Page No : 1

Groups Printed- Total Volume

	S Shingle Road Southbound				Mother Lode Drive Westbound				S Shingle Road Northbound				US-50 Eastbound Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	43	33	45	121	31	8	92	131	25	71	33	129	86	128	60	274	655
04:15 PM	29	46	19	94	31	4	131	166	24	56	42	122	71	121	65	257	639
04:30 PM	30	29	31	90	22	10	92	124	33	73	30	136	101	121	55	277	627
04:45 PM	42	52	27	121	25	8	114	147	25	65	31	121	96	112	52	260	649
Total	144	160	122	426	109	30	429	568	107	265	136	508	354	482	232	1068	2570
05:00 PM	35	41	29	105	22	16	96	134	26	74	27	127	107	95	46	248	614
05:15 PM	37	30	20	87	26	10	106	142	32	55	25	112	100	104	36	240	581
05:30 PM	32	33	20	85	25	9	114	148	16	50	28	94	83	90	47	220	547
05:45 PM	19	36	15	70	21	8	86	115	15	48	19	82	96	106	45	247	514
Total	123	140	84	347	94	43	402	539	89	227	99	415	386	395	174	955	2256
06:00 PM	10	25	33	68	19	8	77	104	16	56	22	94	91	72	28	191	457
06:15 PM	23	24	24	71	9	10	67	86	17	34	22	73	61	76	30	167	397
06:30 PM	17	15	14	46	11	4	44	59	7	36	15	58	54	74	31	159	322
06:45 PM	17	11	16	44	11	4	49	64	8	36	16	60	66	57	33	156	324
Total	67	75	87	229	50	26	237	313	48	162	75	285	272	279	122	673	1500
Grand Total	334	375	293	1002	253	99	1068	1420	244	654	310	1208	1012	1156	528	2696	6326
Apprch %	33.3	37.4	29.2		17.8	7	75.2		20.2	54.1	25.7		37.5	42.9	19.6		
Total %	5.3	5.9	4.6	15.8	4	1.6	16.9	22.4	3.9	10.3	4.9	19.1	16	18.3	8.3	42.6	

	S Shingle Road Southbound				Mother Lode Drive Westbound				S Shingle Road Northbound				US-50 Eastbound Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	<b>43</b>	33	<b>45</b>	<b>121</b>	<b>31</b>	8	92	131	25	71	33	129	86	<b>128</b>	60	274	<b>655</b>
04:15 PM	29	46	19	94	31	4	<b>131</b>	<b>166</b>	24	56	<b>42</b>	122	71	121	<b>65</b>	257	639
04:30 PM	30	29	31	90	22	<b>10</b>	92	124	<b>33</b>	<b>73</b>	30	<b>136</b>	<b>101</b>	121	55	<b>277</b>	627
04:45 PM	42	<b>52</b>	27	121	25	8	114	147	25	65	31	121	96	112	52	260	649
Total Volume	144	160	122	426	109	30	429	568	107	265	136	508	354	482	232	1068	2570
% App. Total	33.8	37.6	28.6		19.2	5.3	75.5		21.1	52.2	26.8		33.1	45.1	21.7		
PHF	.837	.769	.678	.880	.879	.750	.819	.855	.811	.908	.810	.934	.876	.941	.892	.964	.981



# DR22-0009 GRANADE BUSINESS PROPERTIES, LLC

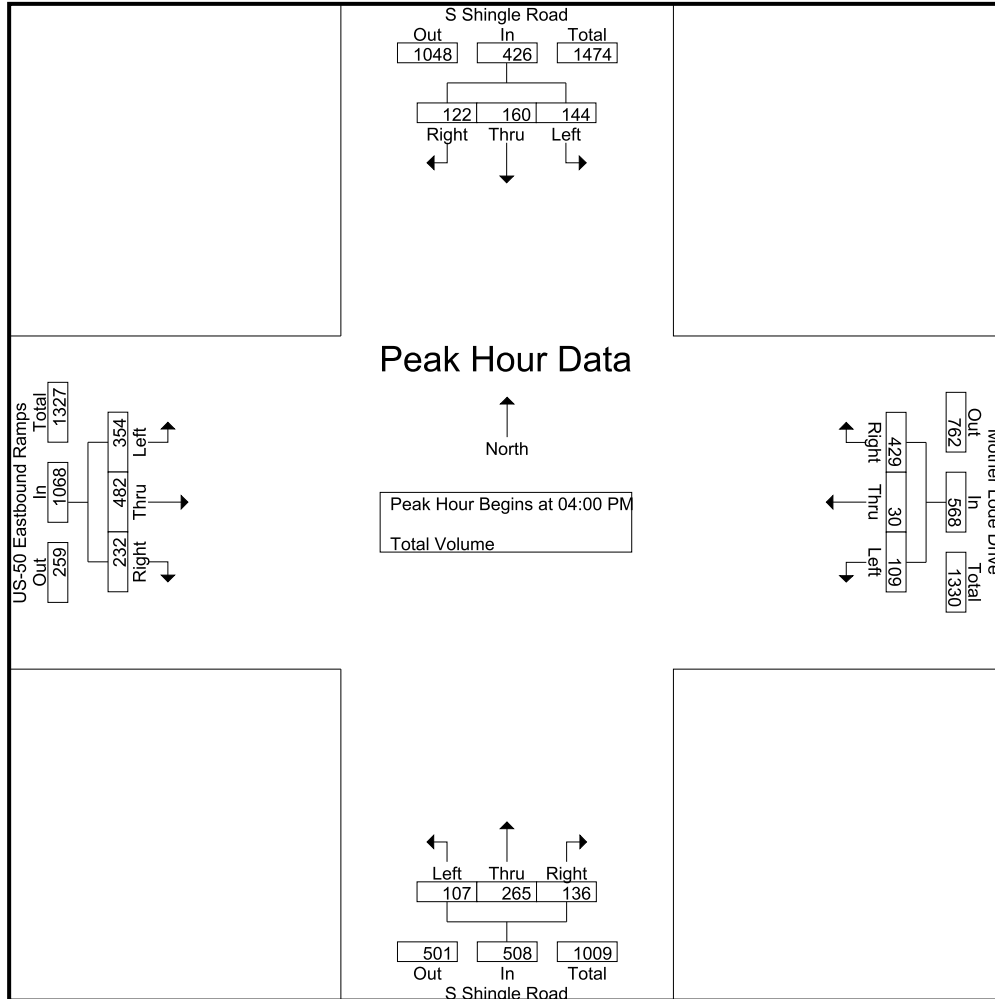
## OFFICE/WAREHOUSE BUILDINGS

### ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT

Counts Unlimited, Inc.  
PO Box 1178  
Corona, CA 92878  
(951)268-6268

County of El Dorado  
N/S: S Shingle Road  
E/W: US-50 EB Ramps/Mother Lode Drive  
Weather: Clear

File Name : 04\_CED\_Shi\_50E PM  
Site Code : 99923038  
Start Date : 1/12/2023  
Page No : 2



Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

	04:00 PM				04:15 PM				04:00 PM				04:00 PM			
+0 mins.	<b>43</b>	33	<b>45</b>	<b>121</b>	<b>31</b>	4	<b>131</b>	<b>166</b>	25	71	33	129	86	<b>128</b>	60	274
+15 mins.	29	46	19	94	22	10	92	124	24	56	<b>42</b>	122	71	121	<b>65</b>	257
+30 mins.	30	29	31	90	25	8	114	147	<b>33</b>	<b>73</b>	30	<b>136</b>	<b>101</b>	121	55	<b>277</b>
+45 mins.	42	<b>52</b>	27	121	22	<b>16</b>	96	134	25	65	31	121	96	112	52	260
Total Volume	144	160	122	426	100	38	433	571	107	265	136	508	354	482	232	1068
% App. Total	33.8	37.6	28.6		17.5	6.7	75.8		21.1	52.2	26.8		33.1	45.1	21.7	
PHF	.837	.769	.678	.880	.806	.594	.826	.860	.811	.908	.810	.934	.876	.941	.892	.964

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951)268-6268

County of El Dorado  
 N/S: S Shingle Road  
 E/W: Durock Road  
 Weather: Clear

File Name : 03\_CED\_Shi\_Dur AM  
 Site Code : 99923038  
 Start Date : 1/12/2023  
 Page No : 1

Groups Printed- Total Volume

	S Shingle Road Southbound				76 Gas Station Driveway Westbound				S Shingle Road Northbound				Durock Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	1	6	22	29	2	0	1	3	1	18	3	22	7	3	1	11	65
06:15 AM	2	4	23	29	2	2	3	7	6	18	1	25	16	0	0	16	77
06:30 AM	2	12	33	47	1	4	6	11	5	30	3	38	15	1	4	20	116
06:45 AM	2	19	48	69	2	1	1	4	8	30	1	39	11	1	3	15	127
Total	7	41	126	174	7	7	11	25	20	96	8	124	49	5	8	62	385
07:00 AM	1	16	39	56	0	0	3	3	7	24	1	32	12	1	6	19	110
07:15 AM	1	27	33	61	1	1	8	10	5	63	3	71	21	1	4	26	168
07:30 AM	1	31	28	60	2	0	3	5	5	65	1	71	16	2	9	27	163
07:45 AM	2	33	32	67	2	0	5	7	5	76	3	84	25	4	7	36	194
Total	5	107	132	244	5	1	19	25	22	228	8	258	74	8	26	108	635
08:00 AM	0	44	43	87	1	1	6	8	8	75	5	88	43	2	7	52	235
08:15 AM	2	37	46	85	3	4	7	14	22	50	3	75	42	2	5	49	223
08:30 AM	2	45	43	90	2	1	4	7	18	61	2	81	20	5	10	35	213
08:45 AM	0	44	51	95	3	2	7	12	11	47	10	68	25	1	9	35	210
Total	4	170	183	357	9	8	24	41	59	233	20	312	130	10	31	171	881
Grand Total	16	318	441	775	21	16	54	91	101	557	36	694	253	23	65	341	1901
Apprch %	2.1	41	56.9		23.1	17.6	59.3		14.6	80.3	5.2		74.2	6.7	19.1		
Total %	0.8	16.7	23.2	40.8	1.1	0.8	2.8	4.8	5.3	29.3	1.9	36.5	13.3	1.2	3.4	17.9	

	S Shingle Road Southbound				76 Gas Station Driveway Westbound				S Shingle Road Northbound				Durock Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	44	43	87	1	1	6	8	8	75	5	88	43	2	7	52	235
08:15 AM	2	37	46	85	3	4	7	14	22	50	3	75	42	2	5	49	223
08:30 AM	2	45	43	90	2	1	4	7	18	61	2	81	20	5	10	35	213
08:45 AM	0	44	51	95	3	2	7	12	11	47	10	68	25	1	9	35	210
Total Volume	4	170	183	357	9	8	24	41	59	233	20	312	130	10	31	171	881
% App. Total	1.1	47.6	51.3		2.2	19.5	58.5		18.9	74.7	6.4		76	5.8	18.1		
PHF	.500	.944	.897	.939	.750	.500	.857	.732	.670	.777	.500	.886	.756	.500	.775	.822	.937

# DR22-0009 GRANADE BUSINESS PROPERTIES, LLC

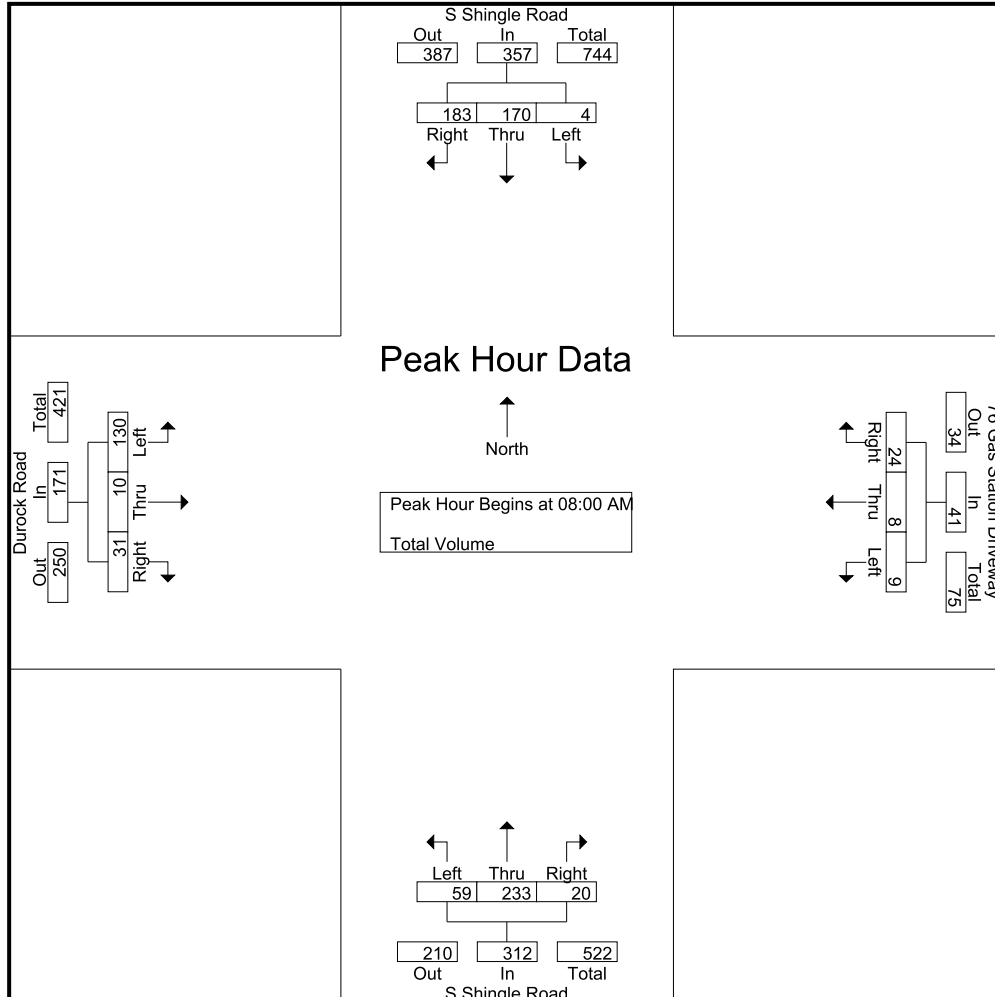
## OFFICE/WAREHOUSE BUILDINGS

### ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT

Counts Unlimited, Inc.  
PO Box 1178  
Corona, CA 92878  
(951)268-6268

County of El Dorado  
N/S: S Shingle Road  
E/W: Durock Road  
Weather: Clear

File Name : 03\_CED\_Shi\_Dur AM  
Site Code : 99923038  
Start Date : 1/12/2023  
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				07:45 AM				07:45 AM			
+0 mins.	0	44	43	87	1	1	6	8	5	<b>76</b>	3	84	25	4	7	36
+15 mins.	2	37	46	85	3	4	7	14	8	75	5	<b>88</b>	43	2	7	52
+30 mins.	2	<b>45</b>	43	90	2	1	4	7	22	50	3	75	42	2	5	49
+45 mins.	0	44	<b>51</b>	<b>95</b>	3	2	7	12	18	61	2	81	20	<b>5</b>	<b>10</b>	35
Total Volume	4	170	183	357	9	8	24	41	53	262	13	328	130	13	29	172
% App. Total	1.1	47.6	51.3		22	19.5	58.5		16.2	79.9	4		75.6	7.6	16.9	
PHF	.500	.944	.897	.939	.750	.500	.857	.732	.602	.862	.650	.932	.756	.650	.725	.827

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951)268-6268

County of El Dorado  
 N/S: S Shingle Road  
 E/W: Durock Road  
 Weather: Clear

File Name : 03\_CED\_Shi\_Dur PM  
 Site Code : 99923038  
 Start Date : 1/12/2023  
 Page No : 1

Groups Printed- Total Volume

	S Shingle Road Southbound				76 Gas Station Driveway Westbound				S Shingle Road Northbound				Durock Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	77	38	116	2	0	11	13	16	62	3	81	56	1	24	81	291
04:15 PM	1	89	51	141	2	1	7	10	16	53	3	72	57	2	31	90	313
04:30 PM	2	77	34	113	3	2	7	12	14	78	4	96	58	4	25	87	308
04:45 PM	0	73	43	116	2	5	3	10	21	59	4	84	56	5	37	98	308
Total	4	316	166	486	9	8	28	45	67	252	14	333	227	12	117	356	1220
05:00 PM	2	76	30	108	3	0	12	15	19	52	7	78	56	2	29	87	288
05:15 PM	0	74	30	104	3	0	9	12	16	55	7	78	48	2	20	70	264
05:30 PM	0	59	29	88	1	1	5	7	15	45	1	61	52	2	25	79	235
05:45 PM	0	72	38	110	0	1	4	5	12	33	4	49	28	3	15	46	210
Total	2	281	127	410	7	2	30	39	62	185	19	266	184	9	89	282	997
06:00 PM	0	41	25	66	4	0	5	9	13	48	8	69	44	2	22	68	212
06:15 PM	1	38	26	65	4	0	2	6	11	38	0	49	33	1	14	48	168
06:30 PM	1	37	14	52	4	1	10	15	6	22	0	28	30	1	13	44	139
06:45 PM	0	40	18	58	2	0	8	10	7	29	3	39	17	1	9	27	134
Total	2	156	83	241	14	1	25	40	37	137	11	185	124	5	58	187	653
Grand Total	8	753	376	1137	30	11	83	124	166	574	44	784	535	26	264	825	2870
Apprch %	0.7	66.2	33.1		24.2	8.9	66.9		21.2	73.2	5.6		64.8	3.2	32		
Total %	0.3	26.2	13.1	39.6	1	0.4	2.9	4.3	5.8	20	1.5	27.3	18.6	0.9	9.2	28.7	

	S Shingle Road Southbound				76 Gas Station Driveway Westbound				S Shingle Road Northbound				Durock Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	1	77	38	116	2	0	11	13	16	62	3	81	56	1	24	81	291
04:15 PM	1	89	51	141	2	1	7	10	16	53	3	72	57	2	31	90	313
04:30 PM	2	77	34	113	3	2	7	12	14	78	4	96	58	4	25	87	308
04:45 PM	0	73	43	116	2	5	3	10	21	59	4	84	56	5	37	98	308
Total Volume	4	316	166	486	9	8	28	45	67	252	14	333	227	12	117	356	1220
% App. Total	0.8	65	34.2		20	17.8	62.2		20.1	75.7	4.2		63.8	3.4	32.9		
PHF	.500	.888	.814	.862	.750	.400	.636	.865	.798	.808	.875	.867	.978	.600	.791	.908	.974

# DR22-0009 GRANADE BUSINESS PROPERTIES, LLC

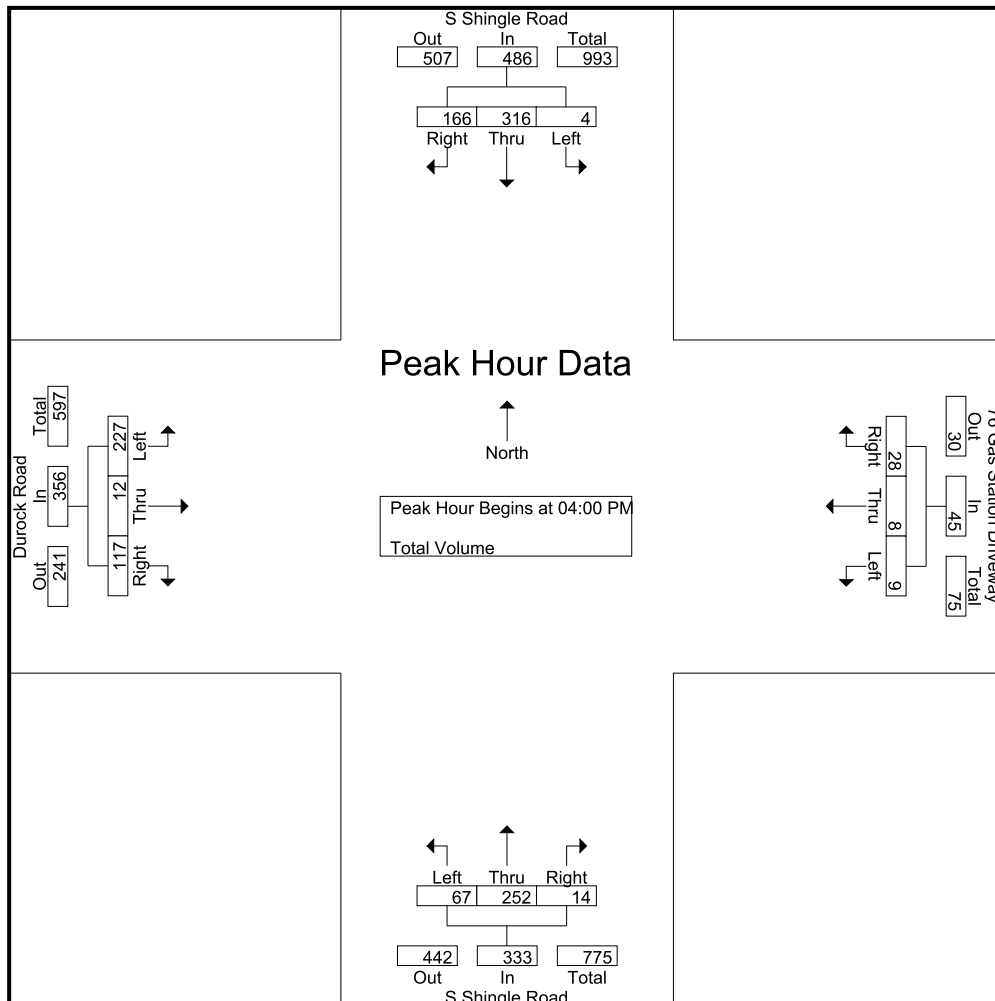
## OFFICE/WAREHOUSE BUILDINGS

### ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT

Counts Unlimited, Inc.  
PO Box 1178  
Corona, CA 92878  
(951)268-6268

County of El Dorado  
N/S: S Shingle Road  
E/W: Durock Road  
Weather: Clear

File Name : 03\_CED\_Shi\_Dur PM  
Site Code : 99923038  
Start Date : 1/12/2023  
Page No : 2



Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:30 PM				04:15 PM			
+0 mins.	1	77	38	116	3	2	7	12	14	78	4	96	57	2	31	90
+15 mins.	1	89	51	141	2	5	3	10	21	59	4	84	58	4	25	87
+30 mins.	2	77	34	113	3	0	12	15	19	52	7	78	56	5	37	98
+45 mins.	0	73	43	116	3	0	9	12	16	55	7	78	56	2	29	87
Total Volume	4	316	166	486	11	7	31	49	70	244	22	336	227	13	122	362
% App. Total	0.8	65	34.2		22.4	14.3	63.3		20.8	72.6	6.5		62.7	3.6	33.7	
PHF	.500	.888	.814	.862	.917	.350	.646	.817	.833	.782	.786	.875	.978	.650	.824	.923

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951)268-6268

County of El Dorado  
 N/S: Product Drive  
 E/W: Durock Road  
 Weather: Clear

File Name : 02\_CED\_Pro\_Dur AM  
 Site Code : 99923038  
 Start Date : 1/12/2023  
 Page No : 1

Groups Printed- Total Volume

	Durock Road Westbound			Product Drive Northbound			Durock Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
06:00 AM	7	10	17	1	4	5	4	1	5	27
06:15 AM	18	12	30	3	7	10	3	0	3	43
06:30 AM	22	18	40	5	3	8	12	6	18	66
06:45 AM	22	20	42	6	4	10	7	2	9	61
Total	69	60	129	15	18	33	26	9	35	197
07:00 AM	18	18	36	5	5	10	13	2	15	61
07:15 AM	12	24	36	15	9	24	13	4	17	77
07:30 AM	4	18	22	10	7	17	19	2	21	60
07:45 AM	13	29	42	10	9	19	30	6	36	97
Total	47	89	136	40	30	70	75	14	89	295
08:00 AM	12	29	41	4	11	15	40	6	46	102
08:15 AM	16	39	55	5	10	15	22	3	25	95
08:30 AM	9	40	49	5	7	12	28	4	32	93
08:45 AM	13	50	63	6	9	15	26	7	33	111
Total	50	158	208	20	37	57	116	20	136	401
Grand Total	166	307	473	75	85	160	217	43	260	893
Apprch %	35.1	64.9		46.9	53.1		83.5	16.5		
Total %	18.6	34.4	53	8.4	9.5	17.9	24.3	4.8	29.1	

	Durock Road Westbound			Product Drive Northbound			Durock Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	12	29	41	4	<b>11</b>	<b>15</b>	<b>40</b>	6	<b>46</b>	102
08:15 AM	<b>16</b>	39	55	5	10	15	22	3	25	95
08:30 AM	9	40	49	5	7	12	28	4	32	93
08:45 AM	13	<b>50</b>	<b>63</b>	<b>6</b>	9	15	26	<b>7</b>	33	<b>111</b>
Total Volume	50	158	208	20	37	57	116	20	136	401
% App. Total	24	76		35.1	64.9		85.3	14.7		
PHF	.781	.790	.825	.833	.841	.950	.725	.714	.739	.903



# DR22-0009 GRANADE BUSINESS PROPERTIES, LLC

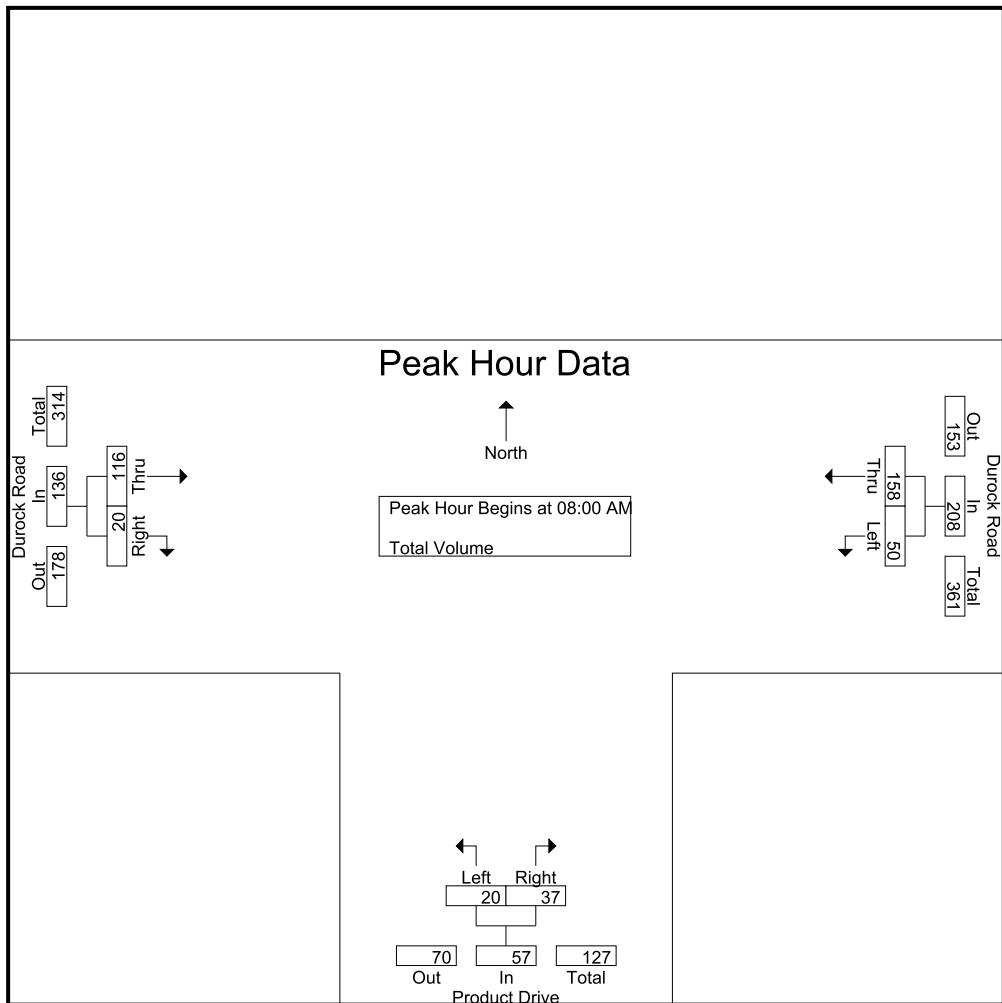
## OFFICE/WAREHOUSE BUILDINGS

### ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT

Counts Unlimited, Inc.  
PO Box 1178  
Corona, CA 92878  
(951)268-6268

County of El Dorado  
N/S: Product Drive  
E/W: Durock Road  
Weather: Clear

File Name : 02\_CED\_Pro\_Dur AM  
Site Code : 99923038  
Start Date : 1/12/2023  
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00 AM			07:15 AM			07:45 AM		
+0 mins.	12	29	41	15	9	24	30	6	36
+15 mins.	16	39	55	10	7	17	40	6	46
+30 mins.	9	40	49	10	9	19	22	3	25
+45 mins.	13	50	63	4	11	15	28	4	32
Total Volume	50	158	208	39	36	75	120	19	139
% App. Total	24	76		52	48		86.3	13.7	
PHF	.781	.790	.825	.650	.818	.781	.750	.792	.755

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951)268-6268

County of El Dorado  
 N/S: Product Drive  
 E/W: Durock Road  
 Weather: Clear

File Name : 02\_CED\_Pro\_Dur PM  
 Site Code : 99923038  
 Start Date : 1/12/2023  
 Page No : 1

Groups Printed- Total Volume

	Durock Road Westbound			Product Drive Northbound			Durock Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	8	32	40	9	16	25	46	6	52	117
04:15 PM	14	35	49	1	20	21	54	6	60	130
04:30 PM	16	46	62	7	30	37	50	7	57	156
04:45 PM	17	48	65	11	15	26	52	6	58	149
Total	55	161	216	28	81	109	202	25	227	552
05:00 PM	5	49	54	6	23	29	40	7	47	130
05:15 PM	5	39	44	9	14	23	44	10	54	121
05:30 PM	10	28	38	9	12	21	43	8	51	110
05:45 PM	14	33	47	1	8	9	33	14	47	103
Total	34	149	183	25	57	82	160	39	199	464
06:00 PM	4	26	30	1	12	13	38	4	42	85
06:15 PM	5	28	33	0	8	8	34	3	37	78
06:30 PM	6	17	23	4	11	15	22	5	27	65
06:45 PM	6	14	20	1	4	5	19	6	25	50
Total	21	85	106	6	35	41	113	18	131	278
Grand Total	110	395	505	59	173	232	475	82	557	1294
Apprch %	21.8	78.2		25.4	74.6		85.3	14.7		
Total %	8.5	30.5	39	4.6	13.4	17.9	36.7	6.3	43	

	Durock Road Westbound			Product Drive Northbound			Durock Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	14	35	49	1	20	21	<b>54</b>	6	<b>60</b>	130
04:30 PM	16	46	62	7	<b>30</b>	<b>37</b>	50	<b>7</b>	<b>57</b>	<b>156</b>
04:45 PM	<b>17</b>	<b>48</b>	<b>65</b>	<b>11</b>	15	26	52	6	58	149
05:00 PM	5	<b>49</b>	54	6	23	29	40	7	47	130
Total Volume	52	178	230	25	88	113	196	26	222	565
% App. Total	22.6	77.4		22.1	77.9		88.3	11.7		
PHF	.765	.908	.885	.568	.733	.764	.907	.929	.925	.905

# DR22-0009 GRANADE BUSINESS PROPERTIES, LLC

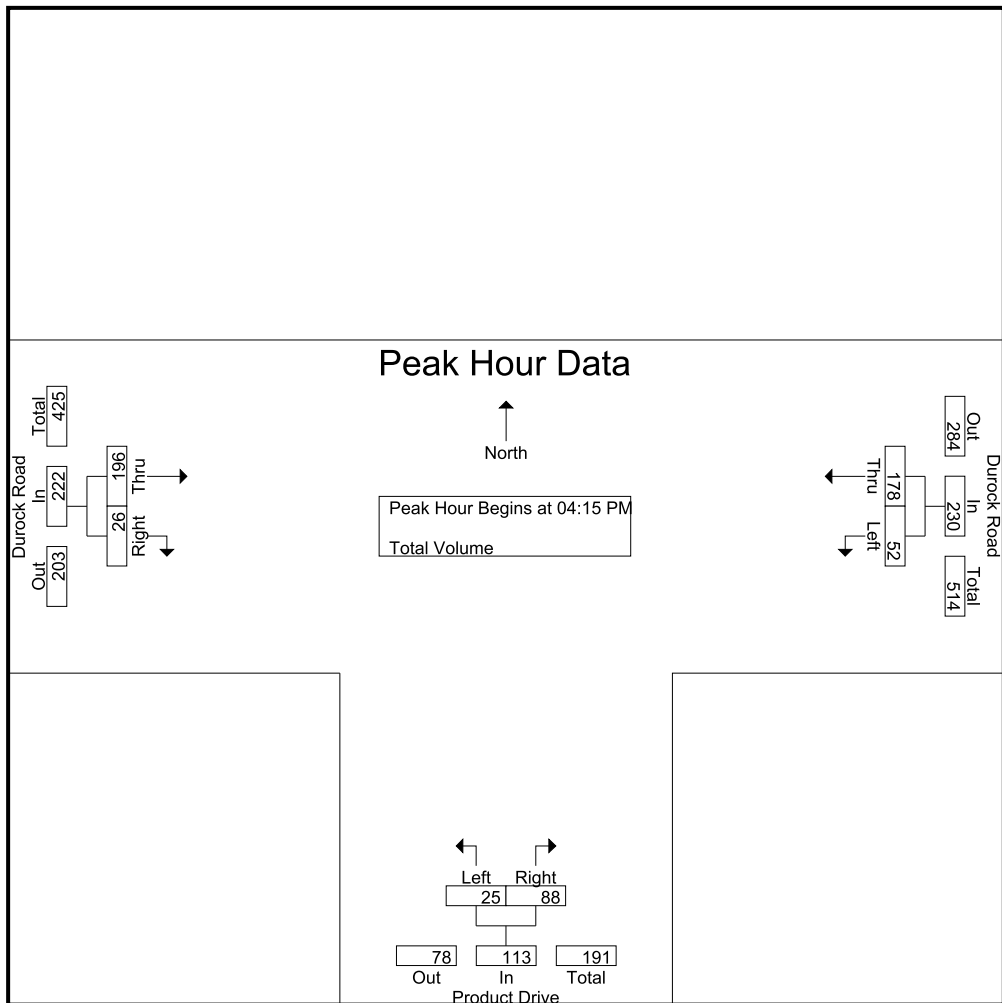
## OFFICE/WAREHOUSE BUILDINGS

### ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT

Counts Unlimited, Inc.  
PO Box 1178  
Corona, CA 92878  
(951)268-6268

County of El Dorado  
N/S: Product Drive  
E/W: Durock Road  
Weather: Clear

File Name : 02\_CED\_Pro\_Dur PM  
Site Code : 99923038  
Start Date : 1/12/2023  
Page No : 2



Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:15 PM			04:30 PM			04:00 PM		
+0 mins.	14	35	49	7	<b>30</b>	<b>37</b>	46	6	52
+15 mins.	16	46	62	<b>11</b>	15	26	<b>54</b>	6	<b>60</b>
+30 mins.	<b>17</b>	48	<b>65</b>	6	23	29	50	<b>7</b>	57
+45 mins.	5	<b>49</b>	54	9	14	23	52	6	58
Total Volume	52	178	230	33	82	115	202	25	227
% App. Total	22.6	77.4		28.7	71.3		89	11	
PHF	.765	.908	.885	.750	.683	.777	.935	.893	.946

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951)268-6268

County of El Dorado  
 N/S: Business Drive  
 E/W: Durock Road  
 Weather: Clear

File Name : 01\_CED\_Bus\_Dur AM  
 Site Code : 99923038  
 Start Date : 1/12/2023  
 Page No : 1

Groups Printed- Total Volume

	Durock Road Westbound			Business Drive Northbound			Durock Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
06:00 AM	8	4	12	7	1	8	5	19	24	44
06:15 AM	3	11	14	12	0	12	3	16	19	45
06:30 AM	5	19	24	9	0	9	14	21	35	68
06:45 AM	5	21	26	9	1	10	8	36	44	80
Total	21	55	76	37	2	39	30	92	122	237
07:00 AM	3	20	23	4	0	4	14	15	29	56
07:15 AM	3	36	39	12	1	13	17	12	29	81
07:30 AM	0	30	30	8	0	8	18	17	35	73
07:45 AM	5	34	39	10	0	10	39	20	59	108
Total	11	120	131	34	1	35	88	64	152	318
08:00 AM	2	30	32	5	3	8	36	8	44	84
08:15 AM	2	40	42	5	1	6	24	11	35	83
08:30 AM	0	46	46	2	1	3	28	7	35	84
08:45 AM	2	55	57	12	3	15	32	11	43	115
Total	6	171	177	24	8	32	120	37	157	366
Grand Total	38	346	384	95	11	106	238	193	431	921
Apprch %	9.9	90.1		89.6	10.4		55.2	44.8		
Total %	4.1	37.6	41.7	10.3	1.2	11.5	25.8	21	46.8	

	Durock Road Westbound			Business Drive Northbound			Durock Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	<b>2</b>	30	32	5	<b>3</b>	8	<b>36</b>	8	<b>44</b>	84
08:15 AM	2	40	42	5	1	6	24	<b>11</b>	35	83
08:30 AM	0	46	46	2	1	3	28	7	35	84
08:45 AM	2	<b>55</b>	<b>57</b>	<b>12</b>	3	<b>15</b>	32	11	43	<b>115</b>
Total Volume	6	171	177	24	8	32	120	37	157	366
% App. Total	3.4	96.6		75	25		76.4	23.6		
PHF	.750	.777	.776	.500	.667	.533	.833	.841	.892	.796

# DR22-0009 GRANADE BUSINESS PROPERTIES, LLC

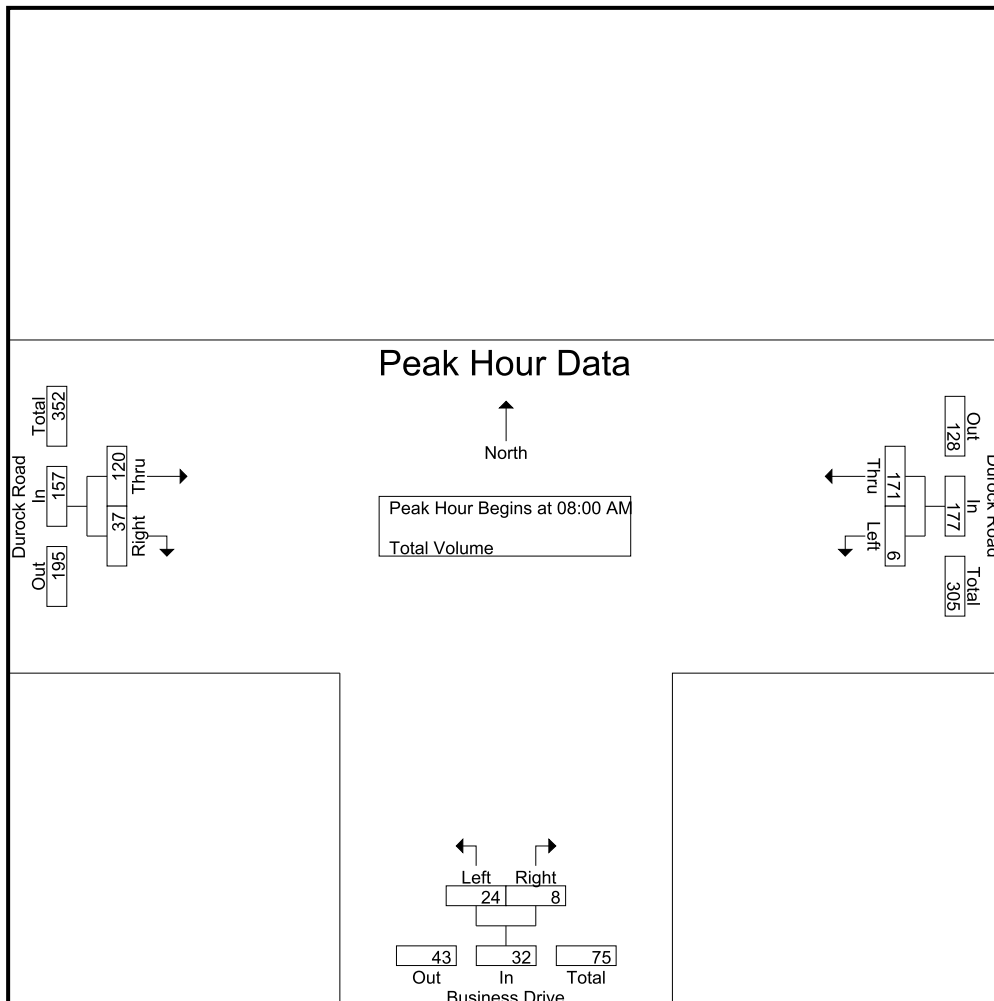
## OFFICE/WAREHOUSE BUILDINGS

### ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT

Counts Unlimited, Inc.  
PO Box 1178  
Corona, CA 92878  
(951)268-6268

County of El Dorado  
N/S: Business Drive  
E/W: Durock Road  
Weather: Clear

File Name : 01\_CED\_Bus\_Dur AM  
Site Code : 99923038  
Start Date : 1/12/2023  
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00 AM			06:00 AM			07:30 AM		
+0 mins.	2	30	32	7	1	8	18	17	35
+15 mins.	2	40	42	12	0	12	39	20	59
+30 mins.	0	46	46	9	0	9	36	8	44
+45 mins.	2	55	57	9	1	10	24	11	35
Total Volume	6	171	177	37	2	39	117	56	173
% App. Total	3.4	96.6		94.9	5.1		67.6	32.4	
PHF	.750	.777	.776	.771	.500	.813	.750	.700	.733

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951)268-6268

County of El Dorado  
 N/S: Business Drive  
 E/W: Durock Road  
 Weather: Clear

File Name : 01\_CED\_Bus\_Dur PM  
 Site Code : 99923038  
 Start Date : 1/12/2023  
 Page No : 1

Groups Printed- Total Volume

	Durock Road Westbound			Business Drive Northbound			Durock Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	3	37	40	30	0	30	44	14	58	128
04:15 PM	1	34	35	27	12	39	48	23	71	145
04:30 PM	2	51	53	18	5	23	52	11	63	139
04:45 PM	4	55	59	27	5	32	53	15	68	159
Total	10	177	187	102	22	124	197	63	260	571
05:00 PM	1	53	54	30	8	38	38	13	51	143
05:15 PM	0	51	51	15	4	19	50	11	61	131
05:30 PM	4	33	37	15	3	18	47	9	56	111
05:45 PM	3	31	34	15	3	18	45	14	59	111
Total	8	168	176	75	18	93	180	47	227	496
06:00 PM	2	26	28	12	7	19	32	12	44	91
06:15 PM	2	26	28	8	3	11	34	6	40	79
06:30 PM	1	22	23	6	2	8	26	5	31	62
06:45 PM	1	16	17	7	1	8	24	5	29	54
Total	6	90	96	33	13	46	116	28	144	286
Grand Total	24	435	459	210	53	263	493	138	631	1353
Apprch %	5.2	94.8		79.8	20.2		78.1	21.9		
Total %	1.8	32.2	33.9	15.5	3.9	19.4	36.4	10.2	46.6	

	Durock Road Westbound			Business Drive Northbound			Durock Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	1	34	35	27	<b>12</b>	<b>39</b>	48	<b>23</b>	<b>71</b>	145
04:30 PM	2	51	53	18	5	23	52	11	63	139
04:45 PM	<b>4</b>	<b>55</b>	<b>59</b>	27	5	32	<b>53</b>	15	68	<b>159</b>
05:00 PM	1	53	54	<b>30</b>	8	38	38	13	51	143
Total Volume	8	193	201	102	30	132	191	62	253	586
% App. Total	4	96		77.3	22.7		75.5	24.5		
PHF	.500	.877	.852	.850	.625	.846	.901	.674	.891	.921

# DR22-0009 GRANADE BUSINESS PROPERTIES, LLC

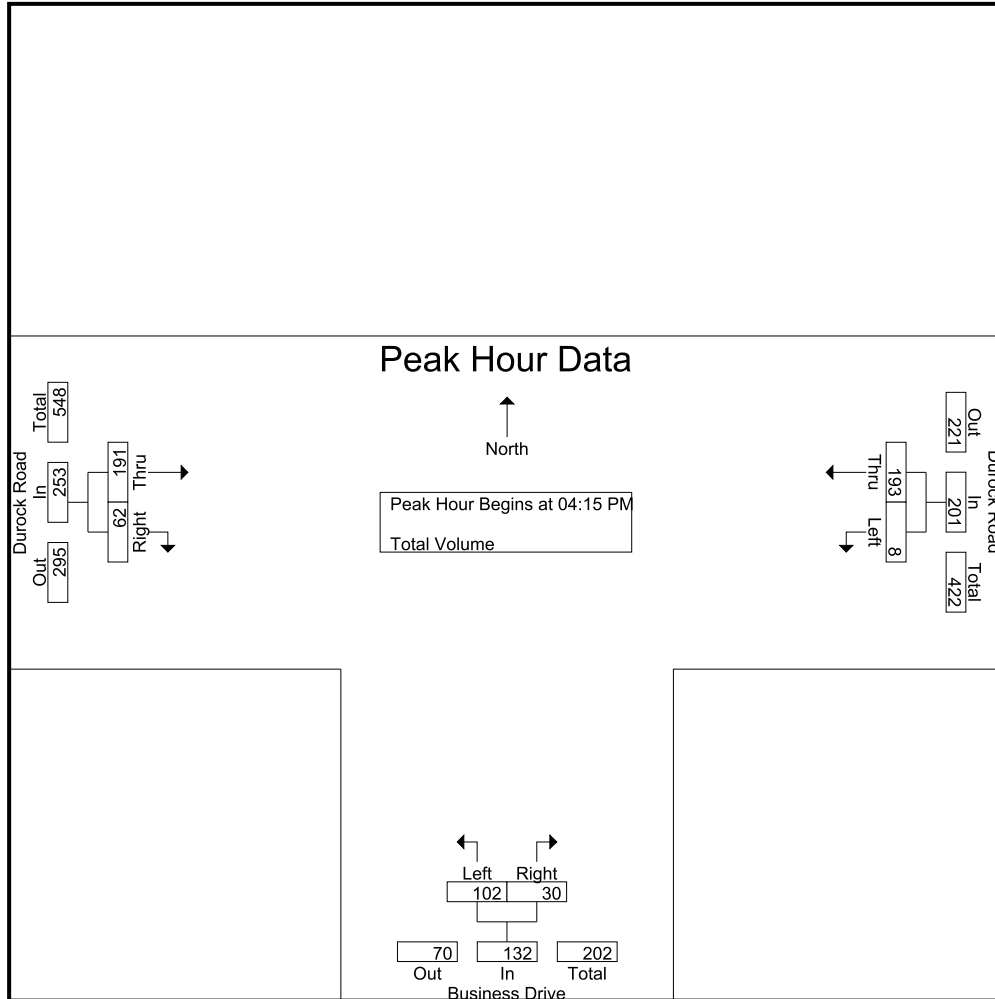
## OFFICE/WAREHOUSE BUILDINGS

### ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT

Counts Unlimited, Inc.  
PO Box 1178  
Corona, CA 92878  
(951)268-6268

County of El Dorado  
N/S: Business Drive  
E/W: Durock Road  
Weather: Clear

File Name : 01\_CED\_Bus\_Dur PM  
Site Code : 99923038  
Start Date : 1/12/2023  
Page No : 2



Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:30 PM			04:15 PM			04:00 PM		
+0 mins.	2	51	53	27	12	39	44	14	58
+15 mins.	4	55	59	18	5	23	48	23	71
+30 mins.	1	53	54	27	5	32	52	11	63
+45 mins.	0	51	51	30	8	38	53	15	68
Total Volume	7	210	217	102	30	132	197	63	260
% App. Total	3.2	96.8		77.3	22.7		75.8	24.2	
PHF	.438	.955	.919	.850	.625	.846	.929	.685	.915



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951)268-6268

County of El Dorado  
 N/S: Business Drive  
 E/W: Product Drive  
 Weather: Clear

File Name : 08\_CED\_Bus\_Pro AM  
 Site Code : 99923038  
 Start Date : 1/12/2023  
 Page No : 1

Groups Printed- Total Volume

	Business Drive Southbound				Product Drive Westbound				Business Drive Northbound				Product Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	2	8	3	13	4	0	0	4	0	2	0	2	0	0	0	0	19
06:15 AM	1	8	7	16	6	3	1	10	0	2	1	3	0	0	0	0	29
06:30 AM	0	10	6	16	7	1	0	8	0	2	0	2	0	0	0	0	26
06:45 AM	1	22	7	30	18	1	0	19	0	2	2	4	0	0	0	0	53
Total	4	48	23	75	35	5	1	41	0	8	3	11	0	0	0	0	127
07:00 AM	0	5	7	12	8	1	0	9	1	5	0	6	0	0	2	2	29
07:15 AM	0	3	4	7	5	1	3	9	0	8	3	11	0	0	0	0	27
07:30 AM	1	10	1	12	3	1	0	4	1	4	2	7	2	0	0	2	25
07:45 AM	1	11	3	15	9	2	0	11	0	12	1	13	2	1	1	4	43
Total	2	29	15	46	25	5	3	33	2	29	6	37	4	1	3	8	124
08:00 AM	0	3	0	3	6	1	0	7	1	5	3	9	2	0	0	2	21
08:15 AM	0	6	1	7	6	1	0	7	0	4	2	6	2	0	0	2	22
08:30 AM	0	3	3	6	5	0	0	5	0	5	0	5	0	1	0	1	17
08:45 AM	0	6	1	7	3	0	1	4	0	7	5	12	0	1	0	1	24
Total	0	18	5	23	20	2	1	23	1	21	10	32	4	2	0	6	84
Grand Total	6	95	43	144	80	12	5	97	3	58	19	80	8	3	3	14	335
Apprch %	4.2	66	29.9		82.5	12.4	5.2		3.8	72.5	23.8		57.1	21.4	21.4		
Total %	1.8	28.4	12.8	43	23.9	3.6	1.5	29	0.9	17.3	5.7	23.9	2.4	0.9	0.9	4.2	

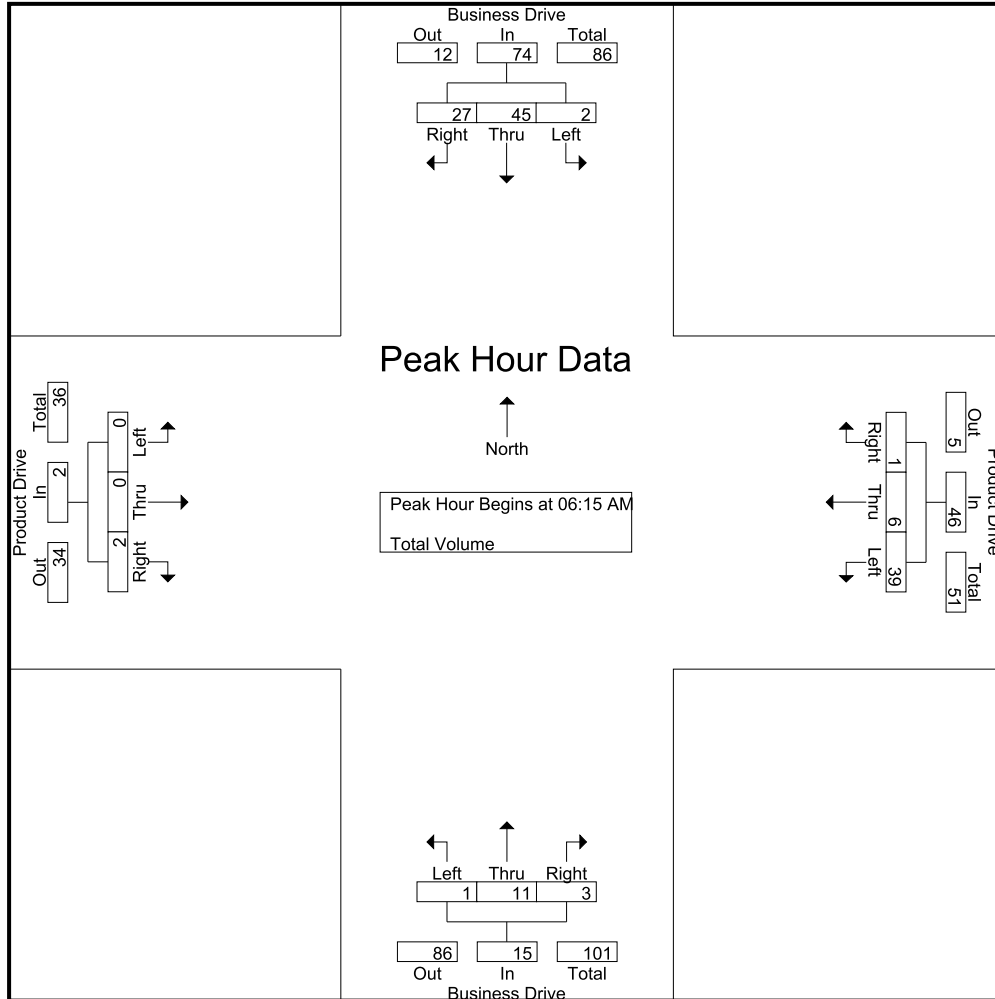
	Business Drive Southbound				Product Drive Westbound				Business Drive Northbound				Product Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:15 AM																	
06:15 AM	1	8	7	16	6	3	1	10	0	2	1	3	0	0	0	0	29
06:30 AM	0	10	6	16	7	1	0	8	0	2	0	2	0	0	0	0	26
06:45 AM	1	22	7	30	18	1	0	19	0	2	2	4	0	0	0	0	53
07:00 AM	0	5	7	12	8	1	0	9	1	5	0	6	0	0	2	2	29
Total Volume	2	45	27	74	39	6	1	46	1	11	3	15	0	0	2	2	137
% App. Total	2.7	60.8	36.5		84.8	13	2.2		6.7	73.3	20		0	0	100		
PHF	.500	.511	.964	.617	.542	.500	.250	.605	.250	.550	.375	.625	.000	.000	.250	.250	.646

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951)268-6268

County of El Dorado  
 N/S: Business Drive  
 E/W: Product Drive  
 Weather: Clear

File Name : 08\_CED\_Bus\_Pro AM  
 Site Code : 99923038  
 Start Date : 1/12/2023  
 Page No : 2



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	06:00 AM				06:15 AM				07:15 AM				07:30 AM			
+0 mins.	2	8	3	13	6	3	1	10	0	8	3	11	2	0	0	2
+15 mins.	1	8	7	16	7	1	0	8	1	4	2	7	2	1	1	4
+30 mins.	0	10	6	16	18	1	0	19	0	12	1	13	2	0	0	2
+45 mins.	1	22	7	30	8	1	0	9	1	5	3	9	2	0	0	2
Total Volume	4	48	23	75	39	6	1	46	2	29	9	40	8	1	1	10
% App. Total	5.3	64	30.7		84.8	13	2.2		5	72.5	22.5		80	10	10	
PHF	.500	.545	.821	.625	.542	.500	.250	.605	.500	.604	.750	.769	1.000	.250	.250	.625

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951)268-6268

County of El Dorado  
 N/S: Business Drive  
 E/W: Product Drive  
 Weather: Clear

File Name : 08\_CED\_Bus\_Pro PM  
 Site Code : 99923038  
 Start Date : 1/12/2023  
 Page No : 1

Groups Printed- Total Volume

	Business Drive Southbound				Product Drive Westbound				Business Drive Northbound				Product Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	2	8	0	10	2	0	3	5	0	18	4	22	6	2	0	8	45
04:15 PM	0	16	0	16	4	1	3	8	0	16	10	26	0	0	0	0	50
04:30 PM	7	6	0	13	5	0	0	5	0	9	15	24	1	1	0	2	44
04:45 PM	4	10	0	14	6	0	1	7	0	16	7	23	2	0	0	2	46
Total	13	40	0	53	17	1	7	25	0	59	36	95	9	3	0	12	185
05:00 PM	0	11	1	12	1	0	0	1	0	16	12	28	4	1	1	6	47
05:15 PM	1	4	1	6	0	0	0	0	0	9	5	14	2	1	0	3	23
05:30 PM	0	10	0	10	2	0	1	3	0	11	5	16	0	0	0	0	29
05:45 PM	0	13	0	13	7	0	2	9	0	15	2	17	1	0	0	1	40
Total	1	38	2	41	10	0	3	13	0	51	24	75	7	2	1	10	139
06:00 PM	1	11	0	12	1	0	2	3	0	12	3	15	1	0	0	1	31
06:15 PM	0	7	0	7	5	0	0	5	0	8	3	11	0	0	0	0	23
06:30 PM	0	4	0	4	1	0	0	1	0	7	4	11	0	1	0	1	17
06:45 PM	0	7	0	7	4	0	0	4	0	7	2	9	0	0	0	0	20
Total	1	29	0	30	11	0	2	13	0	34	12	46	1	1	0	2	91
Grand Total	15	107	2	124	38	1	12	51	0	144	72	216	17	6	1	24	415
Apprch %	12.1	86.3	1.6		74.5	2	23.5		0	66.7	33.3		70.8	25	4.2		
Total %	3.6	25.8	0.5	29.9	9.2	0.2	2.9	12.3	0	34.7	17.3	52	4.1	1.4	0.2	5.8	

	Business Drive Southbound				Product Drive Westbound				Business Drive Northbound				Product Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	<b>16</b>	0	<b>16</b>	4	<b>1</b>	<b>3</b>	<b>8</b>	0	<b>16</b>	10	26	0	0	0	0	<b>50</b>
04:30 PM	<b>7</b>	6	0	13	5	0	0	5	0	9	<b>15</b>	24	1	<b>1</b>	0	2	44
04:45 PM	4	10	0	14	<b>6</b>	0	1	7	0	16	7	23	2	0	0	2	46
05:00 PM	0	11	<b>1</b>	12	1	0	0	1	0	16	12	<b>28</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>6</b>	47
Total Volume	11	43	1	55	16	1	4	21	0	57	44	101	7	2	1	10	187
% App. Total	20	78.2	1.8		76.2	4.8	19		0	56.4	43.6		70	20	10		
PHF	.393	.672	.250	.859	.667	.250	.333	.656	.000	.891	.733	.902	.438	.500	.250	.417	.935

# DR22-0009 GRANADE BUSINESS PROPERTIES, LLC

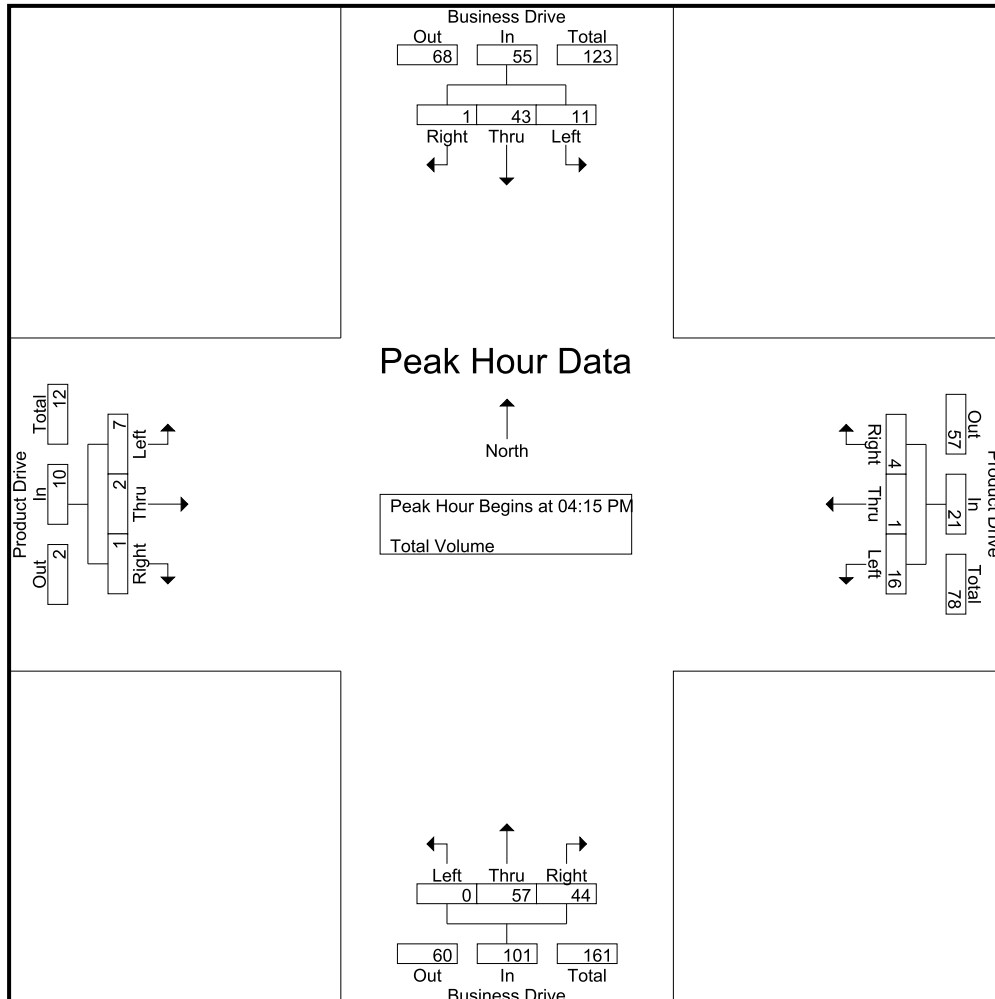
## OFFICE/WAREHOUSE BUILDINGS

### ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT

Counts Unlimited, Inc.  
PO Box 1178  
Corona, CA 92878  
(951)268-6268

County of El Dorado  
N/S: Business Drive  
E/W: Product Drive  
Weather: Clear

File Name : 08\_CED\_Bus\_Pro PM  
Site Code : 99923038  
Start Date : 1/12/2023  
Page No : 2



Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

	04:15 PM				04:00 PM				04:15 PM				04:30 PM			
+0 mins.	0	16	0	16	2	0	3	5	0	16	10	26	1	1	0	2
+15 mins.	7	6	0	13	4	1	3	8	0	9	15	24	2	0	0	2
+30 mins.	4	10	0	14	5	0	0	5	0	16	7	23	4	1	1	6
+45 mins.	0	11	1	12	6	0	1	7	0	16	12	28	2	1	0	3
Total Volume	11	43	1	55	17	1	7	25	0	57	44	101	9	3	1	13
% App. Total	20	78.2	1.8		68	4	28		0	56.4	43.6		69.2	23.1	7.7	
PHF	.393	.672	.250	.859	.708	.250	.583	.781	.000	.891	.733	.902	.563	.750	.250	.542

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951)268-6268

County of El Dorado  
 N/S: Cameron Park Drive  
 E/W: Coach Lane  
 Weather: Clear

File Name : 09\_CED\_CP\_Coach AM  
 Site Code : 99923038  
 Start Date : 1/26/2023  
 Page No : 1

Groups Printed- Total Volume

	Cameron Park Drive Southbound				Coach Lane Westbound				Cameron Park Drive Northbound				Coach Lane Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	5	25	40	70	1	0	9	10	0	18	0	18	22	1	4	27	125
06:15 AM	4	39	27	70	0	1	7	8	3	31	0	34	31	1	4	36	148
06:30 AM	3	44	45	92	0	0	3	3	1	31	0	32	36	1	8	45	172
06:45 AM	12	62	30	104	1	0	4	5	5	22	2	29	28	5	5	38	176
Total	24	170	142	336	2	1	23	26	9	102	2	113	117	8	21	146	621
07:00 AM	3	49	41	93	1	7	16	24	4	29	4	37	35	0	5	40	194
07:15 AM	14	68	54	136	1	1	9	11	7	38	1	46	44	0	0	44	237
07:30 AM	9	52	78	139	0	1	10	11	5	66	0	71	57	1	5	63	284
07:45 AM	11	97	91	199	0	0	6	6	8	52	1	61	73	2	8	83	349
Total	37	266	264	567	2	9	41	52	24	185	6	215	209	3	18	230	1064
08:00 AM	11	68	63	142	0	2	15	17	8	42	4	54	65	3	8	76	289
08:15 AM	15	78	80	173	2	2	10	14	8	46	0	54	60	1	5	66	307
08:30 AM	17	79	94	190	1	2	8	11	13	48	1	62	74	2	11	87	350
08:45 AM	23	81	75	179	0	1	9	10	11	51	0	62	78	4	9	91	342
Total	66	306	312	684	3	7	42	52	40	187	5	232	277	10	33	320	1288
Grand Total	127	742	718	1587	7	17	106	130	73	474	13	560	603	21	72	696	2973
Apprch %	8	46.8	45.2		5.4	13.1	81.5		13	84.6	2.3		86.6	3	10.3		
Total %	4.3	25	24.2	53.4	0.2	0.6	3.6	4.4	2.5	15.9	0.4	18.8	20.3	0.7	2.4	23.4	

	Cameron Park Drive Southbound				Coach Lane Westbound				Cameron Park Drive Northbound				Coach Lane Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	11	<b>97</b>	91	<b>199</b>	0	0	6	6	8	<b>52</b>	1	61	73	2	8	83	349
08:00 AM	11	68	63	142	0	<b>2</b>	<b>15</b>	<b>17</b>	8	42	<b>4</b>	54	65	<b>3</b>	8	76	289
08:15 AM	15	78	80	173	<b>2</b>	2	10	14	8	46	0	54	60	1	5	66	307
08:30 AM	<b>17</b>	79	<b>94</b>	190	1	2	8	11	<b>13</b>	48	1	<b>62</b>	<b>74</b>	2	<b>11</b>	<b>87</b>	<b>350</b>
Total Volume	54	322	328	704	3	6	39	48	37	188	6	231	272	8	32	312	1295
% App. Total	7.7	45.7	46.6		6.2	12.5	81.2		16	81.4	2.6		87.2	2.6	10.3		
PHF	.794	.830	.872	.884	.375	.750	.650	.706	.712	.904	.375	.931	.919	.667	.727	.897	.925

# DR22-0009 GRANADE BUSINESS PROPERTIES, LLC

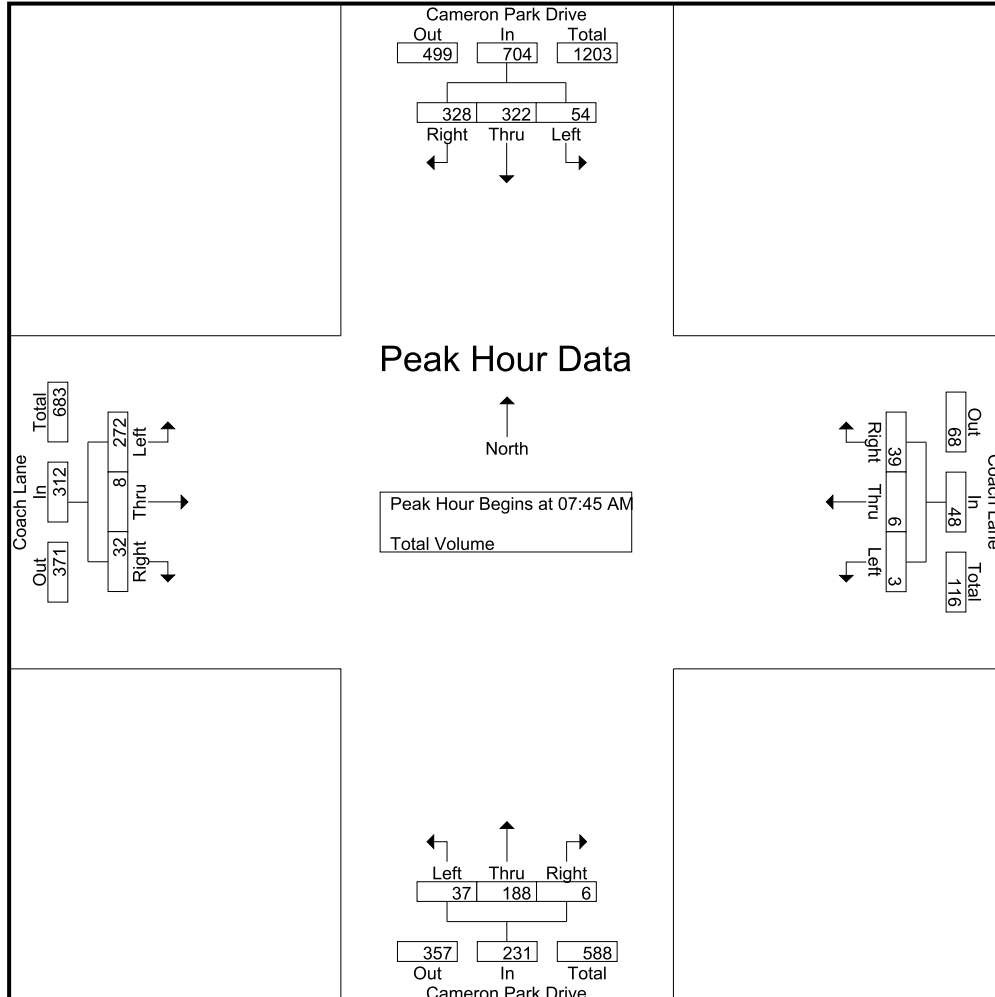
## OFFICE/WAREHOUSE BUILDINGS

### ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT

Counts Unlimited, Inc.  
PO Box 1178  
Corona, CA 92878  
(951)268-6268

County of El Dorado  
N/S: Cameron Park Drive  
E/W: Coach Lane  
Weather: Clear

File Name : 09\_CED\_CP\_Coach AM  
Site Code : 99923038  
Start Date : 1/26/2023  
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

	07:45 AM				07:00 AM				07:30 AM				08:00 AM			
+0 mins.	11	97	91	199	1	7	16	24	5	66	0	71	65	3	8	76
+15 mins.	11	68	63	142	1	1	9	11	8	52	1	61	60	1	5	66
+30 mins.	15	78	80	173	0	1	10	11	8	42	4	54	74	2	11	87
+45 mins.	17	79	94	190	0	0	6	6	8	46	0	54	78	4	9	91
Total Volume	54	322	328	704	2	9	41	52	29	206	5	240	277	10	33	320
% App. Total	7.7	45.7	46.6		3.8	17.3	78.8		12.1	85.8	2.1		86.6	3.1	10.3	
PHF	.794	.830	.872	.884	.500	.321	.641	.542	.906	.780	.313	.845	.888	.625	.750	.879

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951)268-6268

County of El Dorado  
 N/S: Cameron Park Drive  
 E/W: Coach Lane  
 Weather: Clear

File Name : 09\_CED\_CP\_Coach PM  
 Site Code : 99923038  
 Start Date : 1/26/2023  
 Page No : 1

Groups Printed- Total Volume

	Cameron Park Drive Southbound				Coach Lane Westbound				Cameron Park Drive Northbound				Coach Lane Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	6	93	95	194	4	4	13	21	10	117	4	131	116	5	5	126	472
04:15 PM	13	89	116	218	4	4	16	24	8	102	3	113	115	3	8	126	481
04:30 PM	15	99	122	236	0	3	21	24	7	124	4	135	125	3	6	134	529
04:45 PM	11	88	105	204	5	1	25	31	5	138	1	144	118	1	7	126	505
Total	45	369	438	852	13	12	75	100	30	481	12	523	474	12	26	512	1987
05:00 PM	12	93	111	216	2	1	25	28	7	154	1	162	138	1	5	144	550
05:15 PM	19	88	107	214	5	1	11	17	12	111	3	126	130	5	4	139	496
05:30 PM	21	74	106	201	3	5	15	23	16	82	3	101	126	2	11	139	464
05:45 PM	18	50	106	174	6	2	21	29	9	75	6	90	122	5	9	136	429
Total	70	305	430	805	16	9	72	97	44	422	13	479	516	13	29	558	1939
06:00 PM	17	65	103	185	3	1	23	27	6	67	3	76	102	4	5	111	399
06:15 PM	12	54	72	138	1	2	19	22	5	72	1	78	95	3	4	102	340
06:30 PM	16	36	61	113	2	1	11	14	7	55	2	64	93	2	6	101	292
06:45 PM	12	33	63	108	1	2	14	17	1	43	0	44	78	1	3	82	251
Total	57	188	299	544	7	6	67	80	19	237	6	262	368	10	18	396	1282
Grand Total	172	862	1167	2201	36	27	214	277	93	1140	31	1264	1358	35	73	1466	5208
Apprch %	7.8	39.2	53		13	9.7	77.3		7.4	90.2	2.5		92.6	2.4	5		
Total %	3.3	16.6	22.4	42.3	0.7	0.5	4.1	5.3	1.8	21.9	0.6	24.3	26.1	0.7	1.4	28.1	

	Cameron Park Drive Southbound				Coach Lane Westbound				Cameron Park Drive Northbound				Coach Lane Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	15	<b>99</b>	<b>122</b>	<b>236</b>	0	<b>3</b>	21	24	7	124	<b>4</b>	135	125	3	6	134	529
04:45 PM	11	88	105	204	<b>5</b>	1	<b>25</b>	<b>31</b>	5	138	1	144	118	1	<b>7</b>	126	505
05:00 PM	12	93	111	216	2	1	25	28	7	<b>154</b>	1	<b>162</b>	<b>138</b>	1	5	<b>144</b>	<b>550</b>
05:15 PM	<b>19</b>	88	107	214	5	1	11	17	<b>12</b>	111	3	126	130	<b>5</b>	4	139	496
Total Volume	57	368	445	870	12	6	82	100	31	527	9	567	511	10	22	543	2080
% App. Total	6.6	42.3	51.1		12	6	82		5.5	92.9	1.6		94.1	1.8	4.1		
PHF	.750	.929	.912	.922	.600	.500	.820	.806	.646	.856	.563	.875	.926	.500	.786	.943	.945



# DR22-0009 GRANADE BUSINESS PROPERTIES, LLC

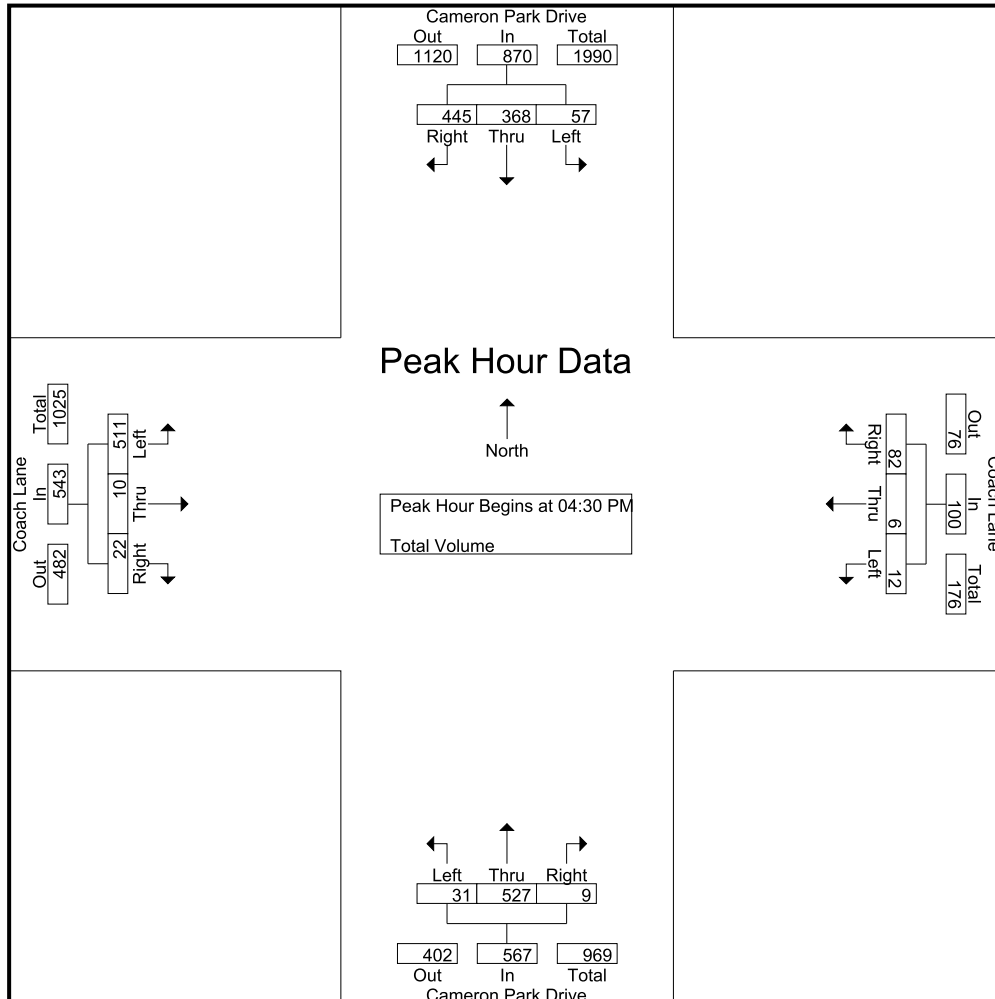
## OFFICE/WAREHOUSE BUILDINGS

### ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT

Counts Unlimited, Inc.  
PO Box 1178  
Corona, CA 92878  
(951)268-6268

County of El Dorado  
N/S: Cameron Park Drive  
E/W: Coach Lane  
Weather: Clear

File Name : 09\_CED\_CP\_Coach PM  
Site Code : 99923038  
Start Date : 1/26/2023  
Page No : 2



Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:30 PM				05:00 PM			
+0 mins.	13	89	116	218	4	4	16	24	7	124	4	135	138	1	5	144
+15 mins.	15	99	122	236	0	3	21	24	5	138	1	144	130	5	4	139
+30 mins.	11	88	105	204	5	1	25	31	7	154	1	162	126	2	11	139
+45 mins.	12	93	111	216	2	1	25	28	12	111	3	126	122	5	9	136
Total Volume	51	369	454	874	11	9	87	107	31	527	9	567	516	13	29	558
% App. Total	5.8	42.2	51.9		10.3	8.4	81.3		5.5	92.9	1.6		92.5	2.3	5.2	
PHF	.850	.932	.930	.926	.550	.563	.870	.863	.646	.856	.563	.875	.935	.650	.659	.969

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951)268-6268

County of El Dorado  
 N/S: Cameron Park Drive  
 E/W: US-50 Eastbound Ramps  
 Weather: Clear

File Name : 06\_CED\_CP\_50E AM  
 Site Code : 99923038  
 Start Date : 1/12/2023  
 Page No : 1

Groups Printed- Total Volume

	Cameron Park Drive Southbound				US-50 Eastbound On Ramp Westbound				Cameron Park Drive Northbound				US-50 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	29	31	0	60	0	0	0	0	0	25	11	36	11	0	38	49	145
06:15 AM	42	30	0	72	0	0	0	0	0	40	23	63	9	0	24	33	168
06:30 AM	48	60	0	108	0	0	0	0	0	41	18	59	11	0	39	50	217
06:45 AM	38	54	0	92	0	0	0	0	0	41	12	53	26	0	54	80	225
Total	157	175	0	332	0	0	0	0	0	147	64	211	57	0	155	212	755
07:00 AM	55	57	0	112	0	0	0	0	0	61	22	83	21	0	45	66	261
07:15 AM	70	72	0	142	0	0	0	0	0	68	31	99	29	0	68	97	338
07:30 AM	90	64	0	154	0	0	0	0	0	72	36	108	30	0	67	97	359
07:45 AM	96	114	0	210	0	0	0	0	0	81	40	121	81	2	63	146	477
Total	311	307	0	618	0	0	0	0	0	282	129	411	161	2	243	406	1435
08:00 AM	122	80	0	202	0	0	0	0	0	76	30	106	63	0	77	140	448
08:15 AM	93	104	0	197	0	0	0	0	0	89	39	128	56	0	55	111	436
08:30 AM	70	97	0	167	0	0	0	0	0	73	36	109	55	1	57	113	389
08:45 AM	81	118	0	199	0	0	0	0	0	95	33	128	54	2	65	121	448
Total	366	399	0	765	0	0	0	0	0	333	138	471	228	3	254	485	1721
Grand Total	834	881	0	1715	0	0	0	0	0	762	331	1093	446	5	652	1103	3911
Apprch %	48.6	51.4	0		0	0	0		0	69.7	30.3		40.4	0.5	59.1		
Total %	21.3	22.5	0	43.9	0	0	0	0	0	19.5	8.5	27.9	11.4	0.1	16.7	28.2	

	Cameron Park Drive Southbound				US-50 Eastbound On Ramp Westbound				Cameron Park Drive Northbound				US-50 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	96	<b>114</b>	0	<b>210</b>	0	0	0	0	0	81	<b>40</b>	121	<b>81</b>	<b>2</b>	63	<b>146</b>	<b>477</b>
08:00 AM	<b>122</b>	80	0	202	0	0	0	0	0	76	30	106	63	0	77	140	448
08:15 AM	93	104	0	197	0	0	0	0	0	<b>89</b>	39	<b>128</b>	56	0	55	111	436
08:30 AM	70	97	0	167	0	0	0	0	0	73	36	109	55	1	57	113	389
Total Volume	381	395	0	776	0	0	0	0	0	319	145	464	255	3	252	510	1750
% App. Total	49.1	50.9	0		0	0	0		0	68.8	31.2		50	0.6	49.4		
PHF	.781	.866	.000	.924	.000	.000	.000	.000	.000	.896	.906	.906	.787	.375	.818	.873	.917

# DR22-0009 GRANADE BUSINESS PROPERTIES, LLC

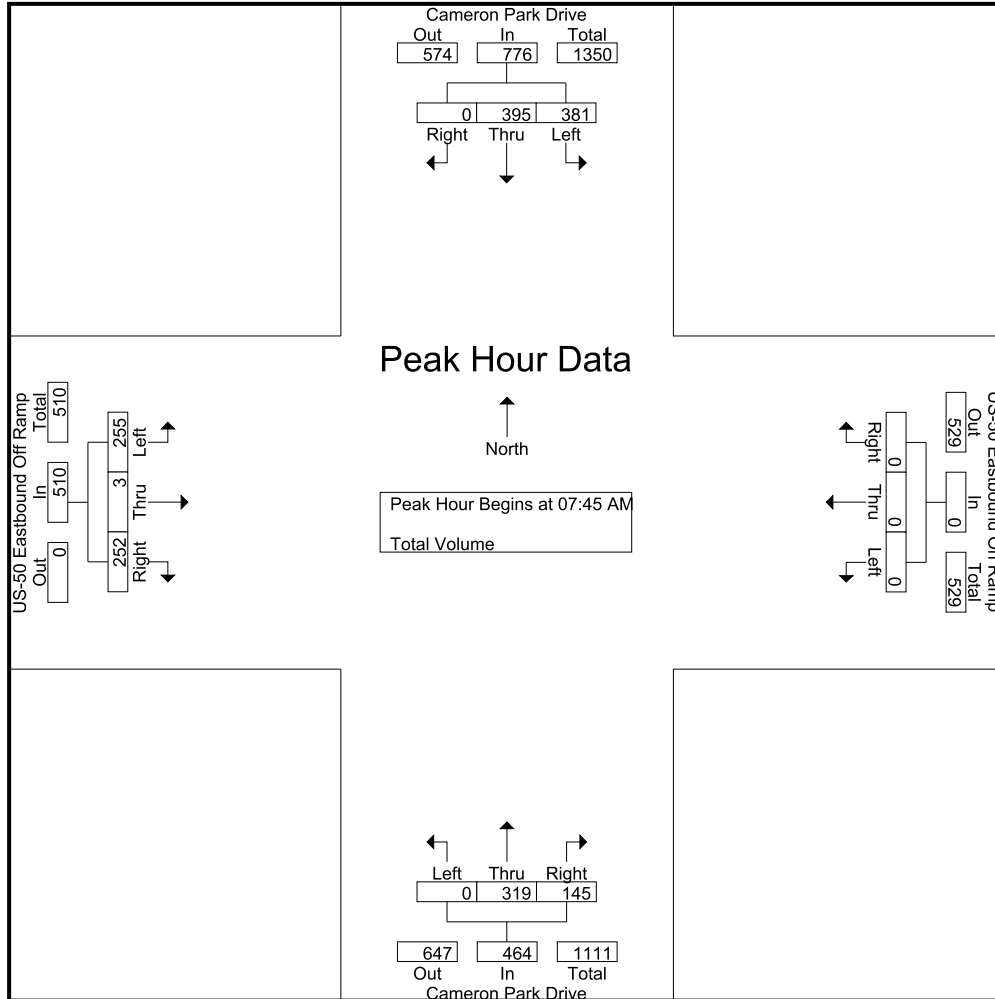
## OFFICE/WAREHOUSE BUILDINGS

### ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT

Counts Unlimited, Inc.  
PO Box 1178  
Corona, CA 92878  
(951)268-6268

County of El Dorado  
N/S: Cameron Park Drive  
E/W: US-50 Eastbound Ramps  
Weather: Clear

File Name : 06\_CED\_CP\_50E AM  
Site Code : 99923038  
Start Date : 1/12/2023  
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

	07:45 AM				06:00 AM				08:00 AM				07:45 AM			
+0 mins.	96	<b>114</b>	0	<b>210</b>	0	0	0	0	0	76	30	106	<b>81</b>	<b>2</b>	63	<b>146</b>
+15 mins.	<b>122</b>	80	0	202	0	0	0	0	0	89	<b>39</b>	<b>128</b>	63	0	<b>77</b>	140
+30 mins.	93	104	0	197	0	0	0	0	0	73	36	109	56	0	55	111
+45 mins.	70	97	0	167	0	0	0	0	0	<b>95</b>	33	128	55	1	57	113
Total Volume	381	395	0	776	0	0	0	0	0	333	138	471	255	3	252	510
% App. Total	49.1	50.9	0		0	0	0		0	70.7	29.3		50	0.6	49.4	
PHF	.781	.866	.000	.924	.000	.000	.000	.000	.000	.876	.885	.920	.787	.375	.818	.873

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951)268-6268

County of El Dorado  
 N/S: Cameron Park Drive  
 E/W: US-50 Eastbound Ramps  
 Weather: Clear

File Name : 06\_CED\_CP\_50E PM  
 Site Code : 99923038  
 Start Date : 1/12/2023  
 Page No : 1

Groups Printed- Total Volume

	Cameron Park Drive Southbound				US-50 Eastbound On Ramp Westbound				Cameron Park Drive Northbound				US-50 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	86	117	0	203	0	0	0	0	0	184	80	264	74	0	92	166	633
04:15 PM	95	145	0	240	0	0	0	0	0	162	61	223	82	1	101	184	647
04:30 PM	106	137	0	243	0	0	0	0	0	176	71	247	89	0	84	173	663
04:45 PM	110	122	0	232	0	0	0	0	0	186	73	259	82	0	86	168	659
Total	397	521	0	918	0	0	0	0	0	708	285	993	327	1	363	691	2602
05:00 PM	121	127	0	248	0	0	0	0	0	198	93	291	56	1	72	129	668
05:15 PM	84	139	0	223	0	0	0	0	0	179	67	246	108	1	85	194	663
05:30 PM	77	106	0	183	0	0	0	0	0	147	77	224	95	1	84	180	587
05:45 PM	70	120	0	190	0	0	0	0	0	154	66	220	75	0	80	155	565
Total	352	492	0	844	0	0	0	0	0	678	303	981	334	3	321	658	2483
06:00 PM	60	111	0	171	0	0	0	0	0	140	54	194	54	0	68	122	487
06:15 PM	56	82	0	138	0	0	0	0	0	110	63	173	67	1	55	123	434
06:30 PM	54	69	0	123	0	0	0	0	0	102	41	143	58	0	47	105	371
06:45 PM	44	69	0	113	0	0	0	0	0	112	30	142	55	0	53	108	363
Total	214	331	0	545	0	0	0	0	0	464	188	652	234	1	223	458	1655
Grand Total	963	1344	0	2307	0	0	0	0	0	1850	776	2626	895	5	907	1807	6740
Apprch %	41.7	58.3	0		0	0	0		0	70.4	29.6		49.5	0.3	50.2		
Total %	14.3	19.9	0	34.2	0	0	0	0	0	27.4	11.5	39	13.3	0.1	13.5	26.8	

	Cameron Park Drive Southbound				US-50 Eastbound On Ramp Westbound				Cameron Park Drive Northbound				US-50 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	106	137	0	243	0	0	0	0	0	176	71	247	89	0	84	173	663
04:45 PM	110	122	0	232	0	0	0	0	0	186	73	259	82	0	86	168	659
05:00 PM	121	127	0	248	0	0	0	0	0	198	93	291	56	1	72	129	668
05:15 PM	84	139	0	223	0	0	0	0	0	179	67	246	108	1	85	194	663
Total Volume	421	525	0	946	0	0	0	0	0	739	304	1043	335	2	327	664	2653
% App. Total	44.5	55.5	0		0	0	0		0	70.9	29.1		50.5	0.3	49.2		
PHF	.870	.944	.000	.954	.000	.000	.000	.000	.000	.933	.817	.896	.775	.500	.951	.856	.993

# DR22-0009 GRANADE BUSINESS PROPERTIES, LLC

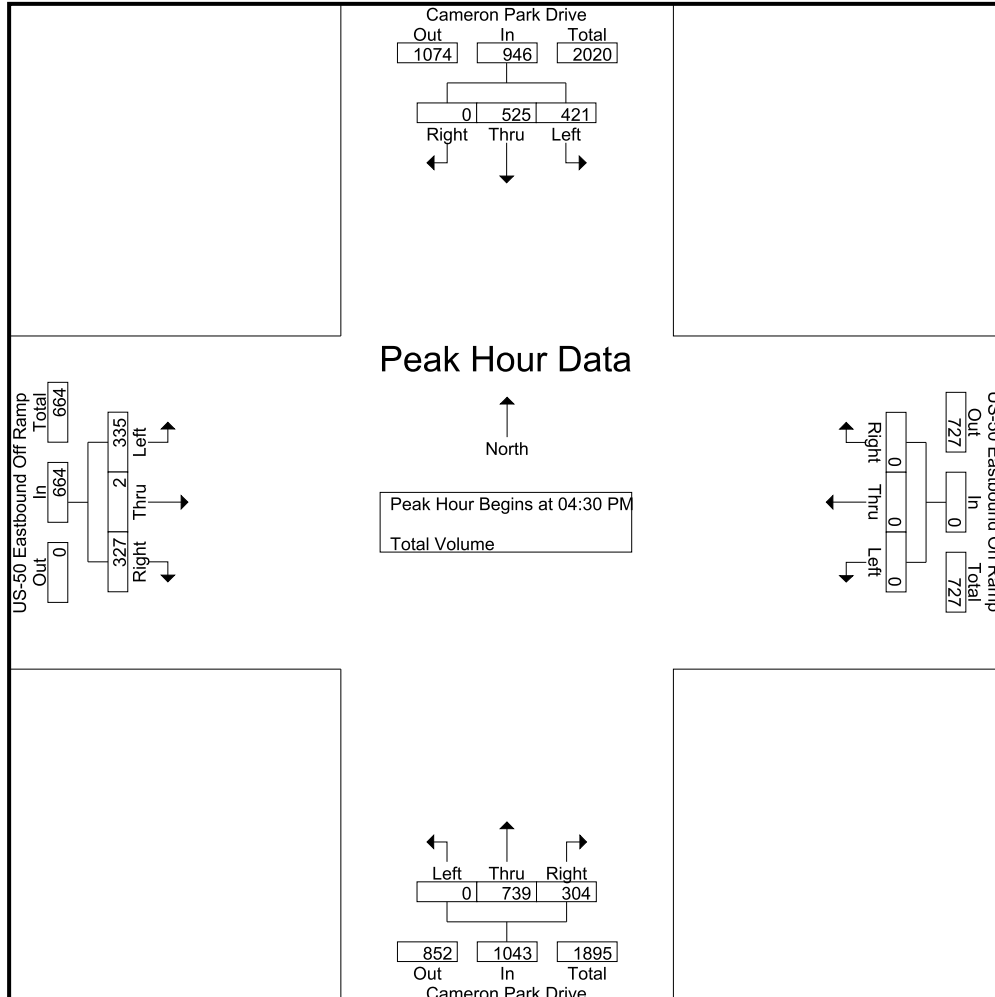
## OFFICE/WAREHOUSE BUILDINGS

### ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT

Counts Unlimited, Inc.  
PO Box 1178  
Corona, CA 92878  
(951)268-6268

County of El Dorado  
N/S: Cameron Park Drive  
E/W: US-50 Eastbound Ramps  
Weather: Clear

File Name : 06\_CED\_CP\_50E PM  
Site Code : 99923038  
Start Date : 1/12/2023  
Page No : 2



Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

	04:15 PM				04:00 PM				04:30 PM				04:00 PM			
+0 mins.	95	<b>145</b>	0	240	0	0	0	0	0	176	71	247	74	0	92	166
+15 mins.	106	137	0	243	0	0	0	0	0	186	73	259	82	<b>1</b>	<b>101</b>	<b>184</b>
+30 mins.	110	122	0	232	0	0	0	0	0	<b>198</b>	<b>93</b>	<b>291</b>	<b>89</b>	0	84	173
+45 mins.	<b>121</b>	127	0	<b>248</b>	0	0	0	0	0	179	67	246	82	0	86	168
Total Volume	432	531	0	963	0	0	0	0	0	739	304	1043	327	1	363	691
% App. Total	44.9	55.1	0		0	0	0		0	70.9	29.1		47.3	0.1	52.5	
PHF	.893	.916	.000	.971	.000	.000	.000	.000	.000	.933	.817	.896	.919	.250	.899	.939

## DR22-0009 GRANADE BUSINESS PROPERTIES, LLC

## OFFICE/WAREHOUSE BUILDINGS

## ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT

Counts Unlimited, Inc.  
PO Box 1178  
Corona, CA 92878  
(951)268-6268

File Name : 07\_CED\_CP\_50W AM  
Site Code : 99923038  
Start Date : 1/12/2023  
Page No : 1

County of El Dorado  
N/S: Cameron Park Drive  
EW: Country Club Drive/US-50 WB Ramps  
Weather: Clear

## Groups Printed- Total Volume

		Cameron Park Drive Southbound						US-50 Westbound Ramps Westbound						Cameron Park Drive Northbound						Country Club Drive Eastbound					
		Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total			
Start Time																									
06:00 AM		0	73	0	73	15	3	14	32	1	19	18	38	1	0	12	13	1	0	12	13	156			
06:15 AM		0	87	8	95	14	4	15	33	2	19	29	50	3	0	13	16	3	0	13	16	194			
06:30 AM		0	128	2	130	15	7	26	48	1	21	30	52	0	0	20	20	0	0	20	20	250			
06:45 AM		0	106	1	107	21	1	42	64	8	40	26	74	6	0	16	22	6	0	16	22	267			
Total		0	394	11	405	65	15	97	177	12	99	103	214	10	0	61	71	10	0	61	71	867			
07:00 AM		0	147	1	148	22	5	45	72	2	40	35	77	5	0	29	34	5	0	29	34	331			
07:15 AM		0	158	3	161	29	6	56	91	5	45	51	101	12	0	24	36	12	0	24	36	389			
07:30 AM		0	201	7	208	18	7	76	101	8	54	46	108	9	0	55	64	9	0	55	64	481			
07:45 AM		0	219	7	226	46	11	99	156	10	110	45	165	16	0	28	44	16	0	28	44	591			
Total		0	725	18	743	115	29	276	420	25	249	177	451	42	0	136	178	42	0	136	178	1792			
08:00 AM		0	210	11	221	32	12	60	104	8	89	32	129	9	0	39	48	9	0	39	48	502			
08:15 AM		0	185	8	193	39	14	100	153	10	91	52	153	8	0	33	41	8	0	33	41	540			
08:30 AM		0	168	9	177	49	11	87	147	12	73	37	122	12	0	32	44	12	0	32	44	490			
08:45 AM		0	179	6	185	48	11	77	136	7	86	57	150	15	0	28	43	15	0	28	43	514			
Total		0	742	34	776	168	48	324	540	37	339	178	554	44	0	132	176	44	0	132	176	2046			
Grand Total		0	1861	63	1924	348	92	697	1137	74	687	458	1219	96	0	329	425	96	0	329	425	4705			
Approch %		0	96.7	3.3		30.6	8.1	61.3		6.1	56.4	37.6		22.6	0	77.4		22.6	0	77.4					
Total %		0	39.6	1.3	40.9	7.4	2	14.8	24.2	1.6	14.6	9.7	25.9	2	0	7		2	0	7		9			

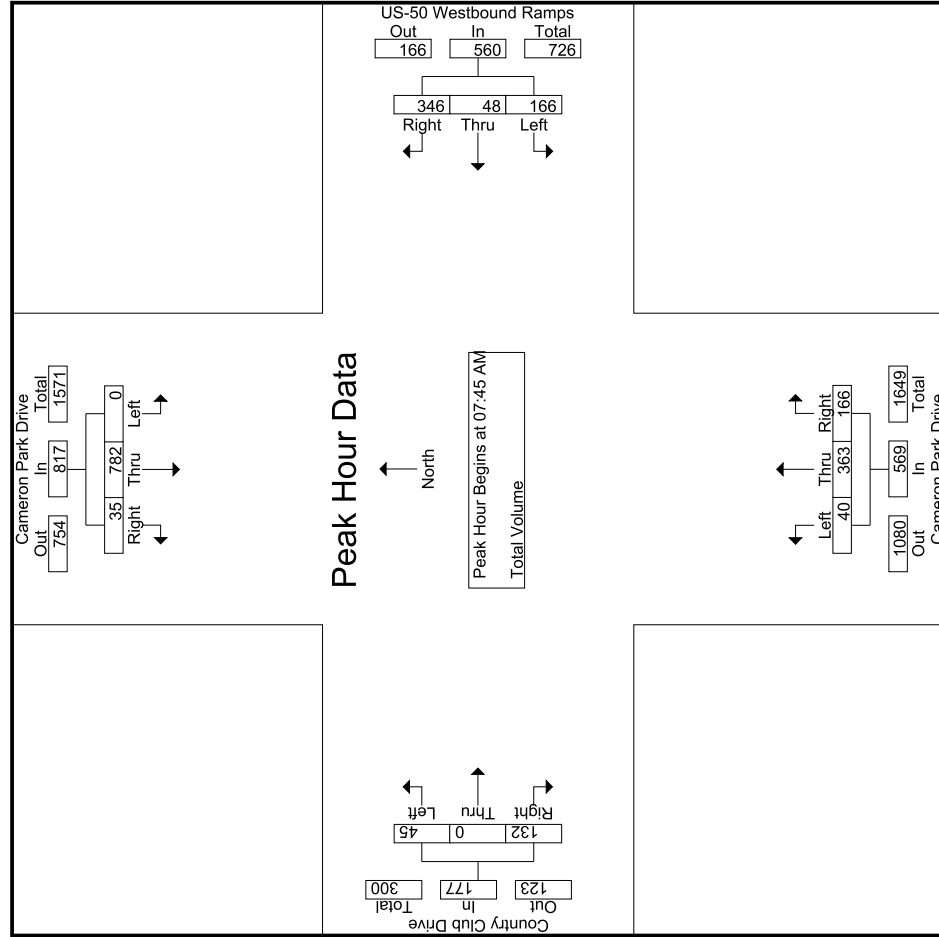
	Cameron Park Drive Southbound						US-50 Westbound Ramps Westbound						Cameron Park Drive Northbound						Country Club Drive Eastbound					
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total			
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																								
Peak Hour for Entire Intersection Begins at 07:45 AM																								
07:45 AM	0	219	7	226	46	11	99	156	10	110	45	165	16	0	28	44					591			
08:00 AM	0	210	11	221	32	12	60	104	8	89	32	129	9	0	39	48					502			
08:15 AM	0	185	8	193	39	14	100	153	10	91	52	153	8	0	33	41					540			
08:30 AM	0	168	9	177	49	11	87	147	12	73	37	122	12	0	32	44					490			
Total Volume		782	35	817	166	48	346	560	40	363	166	569	45	0	132	177					2123			
% App. Total	0	95.7	4.3		29.6	8.6	61.8		7	63.8	29.2		25.4	0	74.6									
PHF	.000	.893	.795	.904	.847	.857	.865	.897	.833	.825	.798	.862	.703	.000	.846	.922					.898			

DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT

File Name : 07\_CED\_CP\_50W AM  
Site Code : 99923038  
Start Date : 1/12/2023  
Page No : 2

Counts Unlimited, Inc.  
PO Box 1178  
Corona, CA 92878  
(951)268-6268

County of El Dorado  
N/S: Cameron Park Drive  
E/W: Country Club Drive/US-50 WB Ramps  
Weather: Clear





**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

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 PO Box 1178  
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County of El Dorado  
 N/S: Cameron Park Drive  
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 Weather: Clear

File Name : 07\_CED\_CP\_50W AM  
 Site Code : 99923038  
 Start Date : 1/12/2023  
 Page No : 3

Start Time	Cameron Park Drive Southbound				US-50 Westbound Ramps Westbound				Cameron Park Drive Northbound				Country Club Drive Eastbound			
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																
Peak Hour for Each Approach Begins at:																
+0 mins.	0	201	7	208	07:45 AM				07:45 AM				07:30 AM			
+15 mins.	0	219	7	226	46	11	99	156	10	110	45	165	9	0	55	64
+30 mins.	0	210	11	221	32	12	60	104	8	89	32	129	16	0	28	44
+45 mins.	0	185	8	193	39	14	100	153	10	91	52	153	9	0	39	48
Total Volume	0	815	33	848	49	11	87	147	12	73	37	122	8	0	33	41
% App. Total	0	96.1	3.9		166	48	346	560	40	363	166	569	42	0	155	197
PHF	.000	.930	.750	.938	29.6	8.6	61.8	.897	7	63.8	29.2	.862	21.3	0	78.7	.770

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

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File Name : 07\_CED\_CP\_50W PM  
 Site Code : 99923038  
 Start Date : 1/12/2023  
 Page No : 1

County of El Dorado  
 N/S: Cameron Park Drive  
 E/W: Country Club Drive/US-50 WB Ramps  
 Weather: Clear

Groups Printed- Total Volume

Groups Limited- Total Volume																								
Cameron Park Drive Southbound					US-50 Westbound Ramps Westbound					Cameron Park Drive Northbound					Country Club Drive Eastbound									
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total							
04:00 PM	0	209	13	222	38	20	98	156	18	172	81	271	17	0	21	38	687							
04:15 PM	0	215	19	234	56	15	92	163	22	156	70	248	7	0	37	44	689							
04:30 PM	0	268	10	278	37	15	66	118	20	176	69	265	13	0	27	40	701							
04:45 PM	0	210	8	218	45	23	117	185	19	179	64	262	16	0	36	52	717							
Total	0	902	50	952	176	73	373	622	79	683	284	1046	53	0	121	174	2794							
05:00 PM	0	258	12	270	50	21	99	170	24	169	73	266	16	0	48	64	770							
05:15 PM	0	220	19	239	41	15	98	154	26	189	72	287	22	0	34	56	736							
05:30 PM	0	192	15	207	46	9	82	137	28	158	69	255	10	0	35	45	644							
05:45 PM	0	184	15	199	46	5	71	122	27	139	67	233	6	0	20	26	580							
Total	0	854	61	915	183	50	350	583	105	655	281	1041	54	0	137	191	2730							
06:00 PM	0	159	8	167	29	10	68	107	23	115	56	194	10	0	22	32	500							
06:15 PM	0	139	11	150	26	5	53	84	16	131	44	191	9	0	17	26	451							
06:30 PM	0	144	7	151	25	6	45	76	16	102	37	155	8	0	13	21	403							
06:45 PM	0	102	11	113	26	6	41	73	18	111	36	165	13	0	15	28	379							
Total	0	544	37	581	106	27	207	340	73	459	173	705	40	0	67	107	1733							
Grand Total	0	2300	148	2448	465	150	930	1545	257	1797	738	2792	147	0	325	472	7257							
Apprch %	0	94	6		30.1	9.7	60.2		9.2	64.4	26.4		31.1	0	68.9									
Total %	0	31.7	2	33.7	6.4	2.1	12.8	21.3	3.5	24.8	10.2	38.5	2	0	4.5	6.5								
Cameron Park Drive Southbound					US-50 Westbound Ramps Westbound					Cameron Park Drive Northbound					Country Club Drive Eastbound									
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total							
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																								
Peak Hour for Entire Intersection Begins at 04:30 PM																								
04:30 PM	0	268	10	278	37	15	66	118	20	176	69	265	13	0	27	40	701							
04:45 PM	0	210	8	218	45	23	117	185	19	179	64	262	16	0	36	52	717							
05:00 PM	0	258	12	270	50	21	99	170	24	169	73	266	16	0	48	64	770							
05:15 PM	0	220	19	239	41	15	98	154	26	189	72	287	22	0	34	56	736							
Total Volume	0	956	49	1005	173	74	380	627	89	713	278	1080	67	0	145	212	2924							
% App. Total	0	95.1	4.9		27.6	11.8	60.6		8.2	66	25.7		31.6	0	68.4									
PHF	.000	.892	.645	.904	.865	.804	.812	.847	.856	.943	.952	.941	.761	.000	.755	.828	.949							

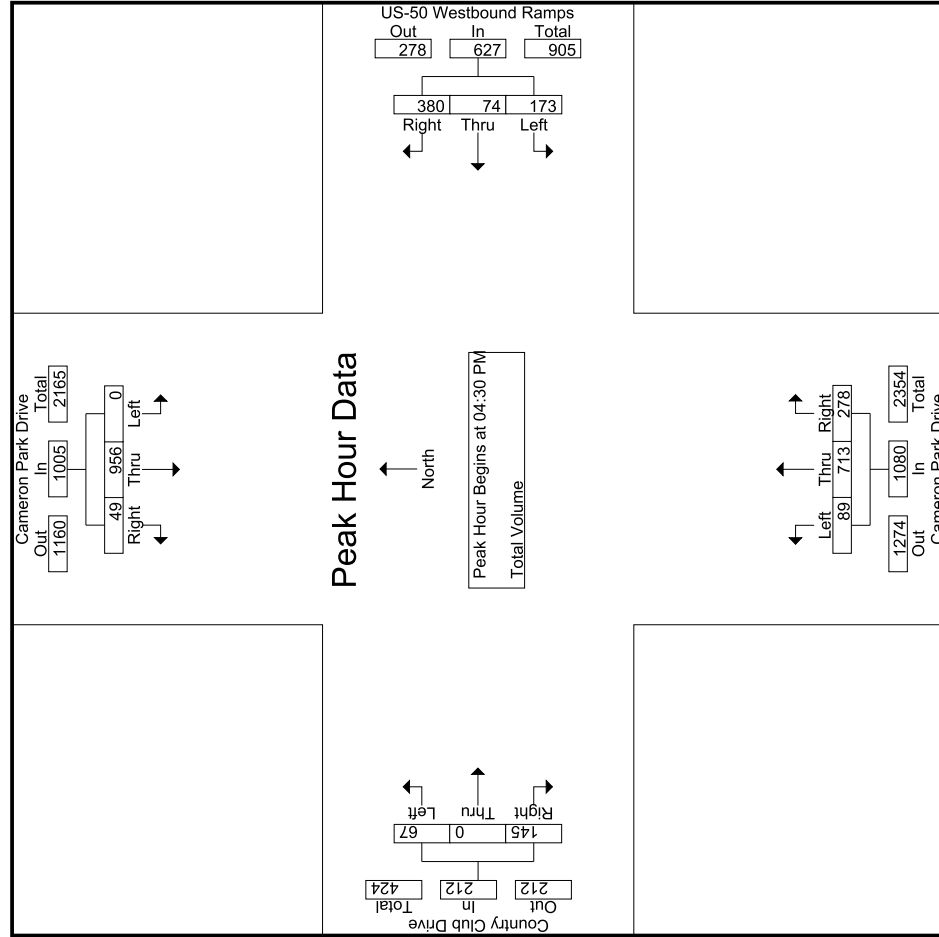
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:30 PM

DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT

File Name : 07\_CED\_CP\_50W PM  
Site Code : 99923038  
Start Date : 1/12/2023  
Page No : 2

Counts Unlimited, Inc.  
PO Box 1178  
Corona, CA 92878  
(951)268-6268

County of El Dorado  
N/S: Cameron Park Drive  
E/W: Country Club Drive/US-50 WB Ramps  
Weather: Clear



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County of El Dorado  
N/S: Cameron Park Drive  
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File Name : 07\_CED\_CP\_50W PM  
Site Code : 99923038  
Start Date : 1/12/2023  
Page No : 3

Start Time	Cameron Park Drive Southbound				US-50 Westbound Ramps				Cameron Park Drive Northbound				Country Club Drive Eastbound						
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total			
	Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																		
Peak Hour for Each Approach Begins at:																			
+0 mins. +15 mins. +30 mins. +45 mins. Total Volume % App. Total PHE	04:30 PM				04:45 PM				04:30 PM				04:45 PM						
	0	268	10	278	45	23	117	185	20	176	69	265	16	0	36	52			
	0	210	8	218	50	21	99	170	19	179	64	262	16	0	48	64			
	0	258	12	270	41	15	98	154	24	169	73	266	22	0	34	56			
	0	220	19	239	46	9	82	137	26	189	72	287	10	0	35	45			
Total Volume				0	956	49	1005	182	68	396	646	89	713	278	1080	64	0	153	217
% App. Total				0	95.1	4.9		28.2	10.5	61.3		8.2	66	25.7	29.5	0	70.5		
PHE				000	892	645	904	910	739	846	873	856	943	952	941	727	000	797	848

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Counts Unlimited, Inc.

Page 1

County of El Dorado  
Durock Road  
B/ Product Drive - Presley Lane  
24 Hour Directional Volume Count

PO Box 1178  
Corona, CA 92878  
Phone: (951) 268-6268  
email: counts@countsunlimited.com

CED002  
Site Code: 999-23038

Start Time	1/12/23 Thu	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		3	41			2	49				
12:15		2	59			2	54				
12:30		1	64			1	57				
12:45		2	63	8	227	1	70	6	230	14	457
01:00		2	58			0	49				
01:15		2	66			0	61				
01:30		0	65			0	51				
01:45		0	55	4	244	1	54	1	215	5	459
02:00		0	39			0	64				
02:15		0	56			1	52				
02:30		1	73			1	41				
02:45		1	53	2	221	0	64	2	221	4	442
03:00		0	70			3	52				
03:15		2	80			0	59				
03:30		2	94			4	76				
03:45		0	72	4	316	4	51	11	238	15	554
04:00		0	64			3	45				
04:15		0	75			4	49				
04:30		0	84			10	60				
04:45		8	68	8	291	27	65	44	219	52	510
05:00		6	67			11	54				
05:15		10	60			10	45				
05:30		7	50			31	39				
05:45		13	40	36	217	34	44	86	182	122	399
06:00		9	52			17	32				
06:15		14	35			29	31				
06:30		13	35			36	21				
06:45		14	21	50	143	51	23	133	107	183	250
07:00		18	26			33	13				
07:15		20	19			40	16				
07:30		27	20			23	12				
07:45		41	15	106	80	39	16	135	57	241	137
08:00		48	16			42	14				
08:15		41	15			56	8				
08:30		34	8			47	5				
08:45		34	7	157	46	61	5	206	32	363	78
09:00		27	12			54	5				
09:15		35	6			42	1				
09:30		35	8			34	8				
09:45		39	9	136	35	50	1	180	15	316	50
10:00		34	1			37	3				
10:15		41	3			32	3				
10:30		40	3			43	2				
10:45		34	7	149	14	44	3	156	11	305	25
11:00		39	5			49	1				
11:15		64	2			51	4				
11:30		45	4			55	0				
11:45		44	2	192	13	61	1	216	6	408	19
Total		852	1847	852	1847	1176	1533	1176	1533	2028	3380
Combined Total		2699		2699		2709		2709		5408	
AM Peak	-	11:00	-	-	-	08:15	-	-	-	-	-
Vol.	-	192	-	-	-	218	-	-	-	-	-
P.H.F.		0.750				0.893					
PM Peak	-	-	03:00	-	-	-	02:45	-	-	-	-
Vol.	-	-	316	-	-	-	251	-	-	-	-
P.H.F.			0.840				0.826				
Percentage		31.6%	68.4%			43.4%	56.6%				
ADT/AADT		ADT 5,408	AADT 5,408								

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Counts Unlimited, Inc.

Page 1

County of El Dorado  
Durock Road  
B/ Robin Lane - Business Drive  
24 Hour Directional Volume Count

PO Box 1178  
Corona, CA 92878  
Phone: (951) 268-6268  
email: counts@countsunlimited.com

CED001  
Site Code: 999-23038

Start Time	1/12/23 Thu	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		1	70			5	81				
12:15		3	69			0	64				
12:30		2	<b>89</b>			0	71				
12:45		2	<b>82</b>	8	310	0	87	5	303	13	613
01:00		4	<b>86</b>			0	64				
01:15		1	<b>89</b>			1	88				
01:30		0	64			0	75				
01:45		3	53	8	292	1	59	2	286	10	578
02:00		0	59			1	82				
02:15		1	68			3	63				
02:30		2	64			1	78				
02:45		0	73	3	264	1	70	6	293	9	557
03:00		0	64			2	76				
03:15		2	75			0	<b>128</b>				
03:30		1	96			4	<b>122</b>				
03:45		1	56	4	291	1	<b>80</b>	7	406	11	697
04:00		1	73			2	<b>79</b>				
04:15		5	70			4	74				
04:30		16	67			5	75				
04:45		21	69	43	279	4	96	15	324	58	603
05:00		10	53			5	93				
05:15		8	68			6	73				
05:30		20	59			12	57				
05:45		44	57	82	237	14	47	37	270	119	507
06:00		28	45			14	42				
06:15		25	41			23	33				
06:30		46	32			29	39				
06:45		57	32	156	150	35	21	101	135	257	285
07:00		36	29			34	20				
07:15		38	19			46	17				
07:30		40	20			42	16				
07:45		70	9	184	77	42	16	164	69	348	146
08:00		51	20			40	15				
08:15		38	12			45	13				
08:30		38	11			49	10				
08:45		45	16	172	59	71	6	205	44	377	103
09:00		38	16			55	8				
09:15		40	5			44	4				
09:30		40	10			28	10				
09:45		61	12	179	43	70	5	197	27	376	70
10:00		45	6			50	4				
10:15		56	1			46	4				
10:30		48	7			51	2				
10:45		<b>52</b>	4	201	18	64	4	211	14	412	32
11:00		<b>69</b>	5			<b>60</b>	3				
11:15		<b>61</b>	5			<b>67</b>	3				
11:30		<b>67</b>	2			<b>75</b>	0				
11:45		51	1	248	13	<b>78</b>	1	280	7	528	20
Total		1288	2033	1288	2033	1230	2178	1230	2178	2518	4211
Combined Total		3321		3321		3408		3408		6729	
AM Peak	-	10:45	-	-	-	11:00	-	-	-	-	-
Vol.	-	249	-	-	-	280	-	-	-	-	-
P.H.F.		0.902				0.897					
PM Peak	-	-	00:30	-	-	-	03:15	-	-	-	-
Vol.	-	-	346	-	-	-	409	-	-	-	-
P.H.F.			0.972				0.799				
Percentage		38.8%	61.2%			36.1%	63.9%				
ADT/AADT		ADT 6,729	AADT 6,729								











**Appendix B  
Existing Conditions LOS Calculations**



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Ponderosa / S. Shingle/ US 50  
Timings

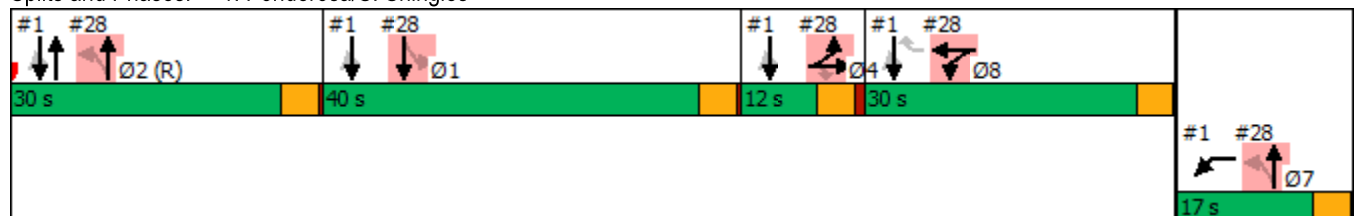
EXISTING AM  
04/28/2023

							
Lane Group	WBL	WBR	NBT	SBT	SBR	Ø1	Ø4
Lane Configurations							
Traffic Volume (vph)	107	176	621	349	483		
Future Volume (vph)	107	176	621	349	483		
Turn Type	Prot	Perm	NA	NA	Perm		
Protected Phases	7		2	1 2 4 8		1	4
Permitted Phases		8			1 2 4 8		
Detector Phase	7	8	2	1 2 4 8	1 2 4 8		
Switch Phase							
Minimum Initial (s)	8.0	10.0	5.0			5.0	3.0
Minimum Split (s)	12.6	22.6	22.5			22.0	9.0
Total Split (s)	17.0	30.0	30.0			40.0	12.0
Total Split (%)	13.2%	23.3%	23.3%			31%	9%
Yellow Time (s)	3.6	3.6	3.6			3.6	3.6
All-Red Time (s)	0.4	0.4	0.4			0.4	1.0
Lost Time Adjust (s)	0.0	0.0	0.0				
Total Lost Time (s)	4.0	4.0	4.0				
Lead/Lag		Lag	Lead			Lag	Lead
Lead-Lag Optimize?		Yes	Yes			Yes	Yes
Recall Mode	None	Min	C-Min			Min	None
Act Effct Green (s)	18.0	21.0	26.0	103.0	103.0		
Actuated g/C Ratio	0.14	0.16	0.20	0.80	0.80		
v/c Ratio	0.52	0.48	0.98	0.28	0.45		
Control Delay	61.4	9.6	80.1	0.6	2.1		
Queue Delay	0.0	85.8	39.4	24.5	37.4		
Total Delay	61.4	95.4	119.6	25.1	39.5		
LOS	E	F	F	C	D		
Approach Delay	82.6		119.6	33.5			
Approach LOS	F		F	C			

**Intersection Summary**

Cycle Length: 129  
Actuated Cycle Length: 129  
Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Green  
Natural Cycle: 150  
Control Type: Actuated-Coordinated  
Maximum v/c Ratio: 1.88  
Intersection Signal Delay: 71.1  
Intersection Capacity Utilization 34.7%  
Analysis Period (min) 15



















Splits and Phases: 1: Ponderosa/S. Shingles



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

S. Shingle/ US 50/Mother Lode  
Timings

EXISTING AM  
04/28/2023

									
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Configurations									
Traffic Volume (vph)	330	425	91	119	13	466	273	66	154
Future Volume (vph)	330	425	91	119	13	466	273	66	154
Turn Type	Split	NA	Free	Split	NA	pt+ov	NA	custom	NA
Protected Phases	4	4		3	3	3 2	1		2
Permitted Phases			Free					2	
Detector Phase	4	4		3	3	3 2	1	2	2
Switch Phase									
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (%)	25.0%	25.0%		25.0%	25.0%		25.0%	25.0%	25.0%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	Max	Max		Max	Max		Max	Max	Max
Act Effct Green (s)	18.0	18.0	90.0	18.0	18.0	40.5	18.0	18.0	18.0
Actuated g/C Ratio	0.20	0.20	1.00	0.20	0.20	0.45	0.20	0.20	0.20
v/c Ratio	1.01	0.70	0.06	0.36	0.04	0.65	0.54	0.17	1.39
Control Delay	89.4	39.6	0.1	34.6	29.5	18.6	35.6	2.0	222.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0
Total Delay	89.4	39.6	0.1	34.6	29.5	18.6	37.8	2.0	222.3
LOS	F	D	A	C	C	B	D	A	F
Approach Delay		55.2			22.0		32.1		222.3
Approach LOS		E			C		C		F

**Intersection Summary**

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 45 (50%), Referenced to phase 2:SBTL, Start of Green

Natural Cycle: 100

Control Type: Pretimed

Maximum v/c Ratio: 1.39

Intersection Signal Delay: 76.3

Intersection LOS: E

Intersection Capacity Utilization 73.6%

ICU Level of Service D

Analysis Period (min) 15









Splits and Phases: 2: S. Shingles & US 50 Off Ramp/Mother Lode



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

S. Shingle/ Durock  
Timings

EXISTING AM  
04/28/2023

				
Lane Group	EBT	WBT	NBT	SBT
Lane Configurations				
Traffic Volume (vph)	10	8	233	170
Future Volume (vph)	10	8	233	170
Turn Type	NA	NA	NA	NA
Protected Phases	4	3	2	1
Permitted Phases				
Detector Phase	4	3	2	1
Switch Phase				
Minimum Initial (s)	6.0	6.0	6.0	12.0
Minimum Split (s)	20.6	10.0	19.3	25.3
Total Split (s)	20.6	10.0	20.0	45.0
Total Split (%)	21.5%	10.5%	20.9%	47.1%
Yellow Time (s)	4.1	3.5	4.8	3.6
All-Red Time (s)	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.0	5.3	4.1
Lead/Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	Min
Act Effct Green (s)	14.0	6.1	37.1	22.4
Actuated g/C Ratio	0.15	0.06	0.39	0.23
v/c Ratio	0.79	0.38	0.26	0.83
Control Delay	58.7	32.4	23.6	42.9
Queue Delay	0.0	0.0	0.0	0.8
Total Delay	58.7	32.4	23.6	43.7
LOS	E	C	C	D
Approach Delay	58.7	32.4	23.6	43.7
Approach LOS	E	C	C	D

**Intersection Summary**

Cycle Length: 95.6

Actuated Cycle Length: 95.6

Offset: 45 (47%), Referenced to phase 2:NBT and 6:, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 39.2

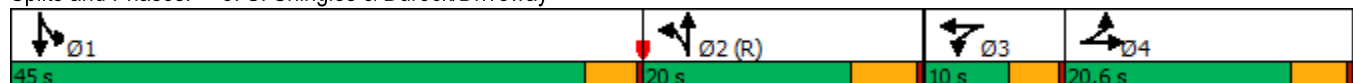
Intersection LOS: D

Intersection Capacity Utilization 57.1%

ICU Level of Service B

Analysis Period (min) 15




Splits and Phases: 3: S. Shingles & Durock/Driveway



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Product Drive/ Durock Rd  
 HCM 6th TWSC













Existing AM  
 04/28/2023

Intersection						
Int Delay, s/veh	2.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	116	20	50	158	20	37
Future Vol, veh/h	116	20	50	158	20	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	126	22	54	172	22	40
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	148	0	417	137
Stage 1	-	-	-	-	137	-
Stage 2	-	-	-	-	280	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1434	-	592	911
Stage 1	-	-	-	-	890	-
Stage 2	-	-	-	-	767	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1434	-	567	911
Mov Cap-2 Maneuver	-	-	-	-	567	-
Stage 1	-	-	-	-	890	-
Stage 2	-	-	-	-	735	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.8		10.2	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	751	-	-	1434	-	
HCM Lane V/C Ratio	0.082	-	-	0.038	-	
HCM Control Delay (s)	10.2	-	-	7.6	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-	

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Business Drive/ Durock Rd  
Timings

Existing AM  
04/28/2023

						
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	24	8	120	37	6	171
Future Volume (vph)	24	8	120	37	6	171
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	2		4			8
Permitted Phases		2		4	8	
Detector Phase	2	2	4	4	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Min	Min	None	None	None	None
Act Effct Green (s)	9.9	9.9	7.9	7.9	8.0	8.0
Actuated g/C Ratio	0.41	0.41	0.33	0.33	0.33	0.33
v/c Ratio	0.06	0.02	0.22	0.08	0.02	0.35
Control Delay	7.2	4.2	6.4	2.6	5.2	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.2	4.2	6.4	2.6	5.2	7.5
LOS	A	A	A	A	A	A
Approach Delay	6.5		5.5			7.4
Approach LOS	A		A			A

**Intersection Summary**

Cycle Length: 45

Actuated Cycle Length: 24.1

Natural Cycle: 45

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.35

Intersection Signal Delay: 6.6

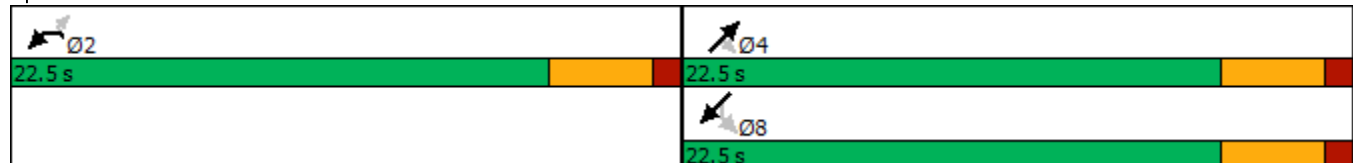
Intersection LOS: A

Intersection Capacity Utilization 20.7%

ICU Level of Service A

Analysis Period (min) 15





Splits and Phases: 5: Business Dr & Durock



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Business Drive/ Product Drive  
 HCM 6th TWSC



















Existing AM  
 04/28/2023

Intersection												
Int Delay, s/veh	3.7											
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	1	11	3	2	45	27	0	0	2	39	6	1
Future Vol, veh/h	1	11	3	2	45	27	0	0	2	39	6	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	60	60	60	62	62	62	25	25	25	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	18	5	3	73	44	0	0	8	65	10	2
Major/Minor	Major1			Major2			Minor2			Minor1		
Conflicting Flow All	117	0	0	23	0	0	132	128	95	130	148	21
Stage 1	-	-	-	-	-	-	101	101	-	25	25	-
Stage 2	-	-	-	-	-	-	31	27	-	105	123	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1471	-	-	1592	-	-	840	763	962	843	743	1056
Stage 1	-	-	-	-	-	-	905	811	-	993	874	-
Stage 2	-	-	-	-	-	-	986	873	-	901	794	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1471	-	-	1592	-	-	828	761	962	834	741	1056
Mov Cap-2 Maneuver	-	-	-	-	-	-	828	761	-	834	741	-
Stage 1	-	-	-	-	-	-	904	809	-	992	873	-
Stage 2	-	-	-	-	-	-	972	872	-	892	792	-
Approach	NB			SB			NE			SW		
HCM Control Delay, s	0.5			0.2			8.8			9.8		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NELn1	NBL	NBT	NBR	SBL	SBT	SBRSWLn1					
Capacity (veh/h)	962	1471	-	-	1592	-	-	-	824			
HCM Lane V/C Ratio	0.008	0.001	-	-	0.002	-	-	-	0.093			
HCM Control Delay (s)	8.8	7.5	0	-	7.3	0	-	-	9.8			
HCM Lane LOS	A	A	A	-	A	A	-	-	A			
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-	0.3			

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Cameron Park Dr. and Coach Lane  
Timings

Existing AM  
04/28/2023

									
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	272	8	6	39	37	188	54	322	328
Future Volume (vph)	272	8	6	39	37	188	54	322	328
Turn Type	Split	NA	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	3	3	4		5	2	1	6	
Permitted Phases				4					6
Detector Phase	3	3	4	4	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	2.0	2.0	2.0	2.0	4.0	3.0	4.0	3.0	3.0
Minimum Split (s)	10.0	10.0	20.5	20.5	9.5	18.5	9.5	22.6	22.6
Total Split (s)	15.0	15.0	20.5	20.5	15.0	40.0	17.0	40.0	40.0
Total Split (%)	16.2%	16.2%	22.2%	22.2%	16.2%	43.2%	18.4%	43.2%	43.2%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.9	3.0	3.6	3.6
All-Red Time (s)	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	3.0	3.5	3.5	3.5	4.4	3.5	4.1	4.1
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes		
Recall Mode	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	14.6	14.6	5.2	5.2	6.6	53.9	7.6	56.9	56.9
Actuated g/C Ratio	0.16	0.16	0.06	0.06	0.07	0.58	0.08	0.62	0.62
v/c Ratio	0.66	0.63	0.12	0.31	0.32	0.10	0.42	0.32	0.33
Control Delay	48.1	43.9	43.4	7.6	46.7	11.1	48.3	12.3	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.5
Total Delay	48.1	43.9	43.4	7.6	46.7	11.1	48.3	13.3	2.9
LOS	D	D	D	A	D	B	D	B	A
Approach Delay		46.0	14.0			16.8		11.1	
Approach LOS		D	B			B		B	

**Intersection Summary**

Cycle Length: 92.5

Actuated Cycle Length: 92.5

Offset: 17 (18%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 20.5

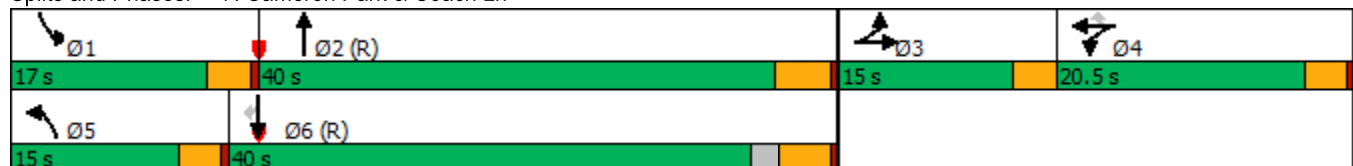
Intersection LOS: C

Intersection Capacity Utilization 45.7%

ICU Level of Service A

Analysis Period (min) 15













Splits and Phases: 7: Cameron Park & Coach Ln



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Cameron Park Dr. and US 50 E/B Ramps  
Timings

Existing AM  
04/28/2023

						
Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	252	319	145	381	395
Future Volume (vph)	3	252	319	145	381	395
Turn Type	NA	Prot	NA	Perm	Prot	NA
Protected Phases	4	4	2		1	6
Permitted Phases				2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	2.0	2.0	3.0	3.0	4.0	3.0
Minimum Split (s)	6.0	6.0	8.0	8.0	7.0	21.0
Total Split (s)	30.0	30.0	35.0	35.0	23.0	35.0
Total Split (%)	34.1%	34.1%	39.8%	39.8%	26.1%	39.8%
Yellow Time (s)	3.0	3.0	3.6	3.6	3.0	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	0.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.6	4.6	3.0	4.6
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	20.2	20.2	40.9	40.9	15.3	59.2
Actuated g/C Ratio	0.23	0.23	0.46	0.46	0.17	0.67
v/c Ratio	0.73	0.49	0.21	0.19	0.69	0.18
Control Delay	41.5	6.3	16.3	4.0	40.2	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.5	6.3	16.3	4.0	40.2	6.2
LOS	D	A	B	A	D	A
Approach Delay	24.1		12.4			22.9
Approach LOS	C		B			C

**Intersection Summary**

Cycle Length: 88

Actuated Cycle Length: 88

Offset: 65 (74%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 20.5

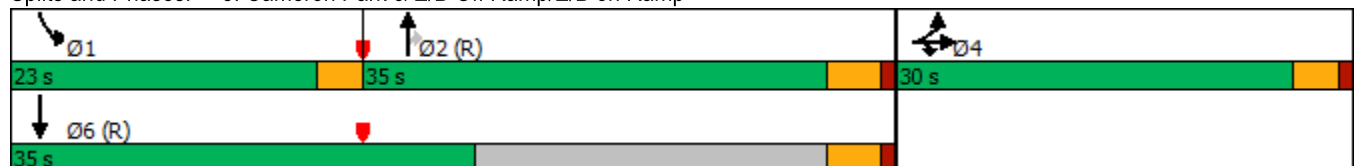
Intersection LOS: C

Intersection Capacity Utilization 44.6%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 8: Cameron Park & E/B Off Ramp/E/B on Ramp





















**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Cameron Park Dr. and US 50 W/B Ramps  
Timings

Existing AM  
04/28/2023

									
Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	SBT	SBR	Ø4
Lane Configurations									
Traffic Volume (vph)	45	132	166	48	40	363	782	35	
Future Volume (vph)	45	132	166	48	40	363	782	35	
Turn Type	Prot	pt+ov	Prot	NA	Prot	NA	NA	Perm	
Protected Phases	7	4 5	3	8	5	2	6		4
Permitted Phases								6	
Detector Phase	7	4 5	3	8	5	2	6	6	
Switch Phase									
Minimum Initial (s)	4.0		6.0	4.0	4.0	10.0	6.0	6.0	4.0
Minimum Split (s)	8.0		10.0	22.1	8.0	24.0	10.5	10.5	23.5
Total Split (s)	15.0		25.0	22.1	15.0	35.0	35.0	35.0	23.5
Total Split (%)	15.2%		25.4%	22.4%	15.2%	35.5%	35.5%	35.5%	24%
Yellow Time (s)	3.0		3.0	3.6	3.5	3.5	3.9	3.9	3.0
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5		3.5	4.1	4.0	4.0	4.4	4.4	
Lead/Lag	Lead		Lead	Lag	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None		None	None	None	C-Max	C-Max	C-Max	None
Act Effct Green (s)	7.4	18.6	15.0	15.7	7.6	65.4	53.4	53.4	
Actuated g/C Ratio	0.08	0.19	0.15	0.16	0.08	0.66	0.54	0.54	
v/c Ratio	0.40	0.37	0.68	0.76	0.35	0.18	0.45	0.04	
Control Delay	51.6	8.1	51.9	16.2	49.3	7.5	16.4	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	51.6	8.1	51.9	16.2	49.3	7.5	16.4	0.1	
LOS	D	A	D	B	D	A	B	A	
Approach Delay				26.8		11.7	15.7		
Approach LOS				C		B	B		

**Intersection Summary**

Cycle Length: 98.5

Actuated Cycle Length: 98.5

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 18.3

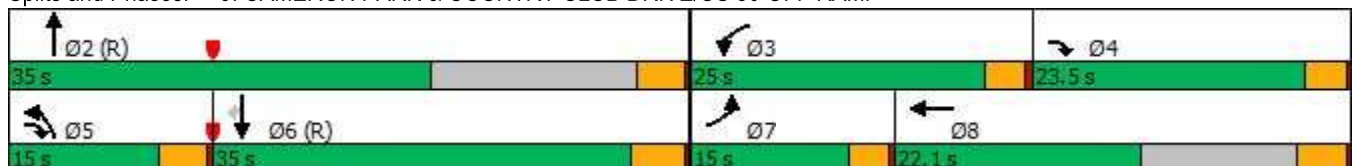
Intersection LOS: B

Intersection Capacity Utilization 65.9%

ICU Level of Service C

Analysis Period (min) 15











Splits and Phases: 9: CAMERON PARK & COUNTRY CLUB DRIVE/US 50 OFF RAMP



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Ponderosa/ S. Shingle/ US 50  
Timings

EXISTING PM  
04/28/2023

							
Lane Group	WBL	WBR	NBT	SBT	SBR	Ø1	Ø4
Lane Configurations							
Traffic Volume (vph)	121	115	645	288	305		
Future Volume (vph)	121	115	645	288	305		
Turn Type	Prot	Perm	NA	NA	Perm		
Protected Phases	7		2	1 2 4 8		1	4
Permitted Phases		8			1 2 4 8		
Detector Phase	7	8	2	1 2 4 8	1 2 4 8		
Switch Phase							
Minimum Initial (s)	8.0	10.0	5.0			5.0	3.0
Minimum Split (s)	12.6	22.6	18.0			29.0	9.0
Total Split (s)	17.0	30.0	30.0			40.0	12.0
Total Split (%)	13.2%	23.3%	23.3%			31%	9%
Yellow Time (s)	3.6	3.6	3.6			3.6	3.6
All-Red Time (s)	0.4	0.4	0.4			0.4	0.4
Lost Time Adjust (s)	0.0	0.0	0.0				
Total Lost Time (s)	4.0	4.0	4.0				
Lead/Lag		Lag	Lead			Lag	Lead
Lead-Lag Optimize?		Yes	Yes			Yes	Yes
Recall Mode	None	Min	C-Min			Min	None
Act Effct Green (s)	17.0	21.8	26.2	104.0	104.0		
Actuated g/C Ratio	0.13	0.17	0.20	0.81	0.81		
v/c Ratio	0.57	0.34	0.98	0.21	0.25		
Control Delay	64.3	9.8	79.6	0.4	0.0		
Queue Delay	0.0	96.4	39.7	7.2	7.2		
Total Delay	64.3	106.2	119.2	7.5	7.2		
LOS	E	F	F	A	A		
Approach Delay	84.7		119.2	7.4			
Approach LOS	F		F	A			

**Intersection Summary**

Cycle Length: 129

Actuated Cycle Length: 129

Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Green

Natural Cycle: 125

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 3.11

Intersection Signal Delay: 68.7

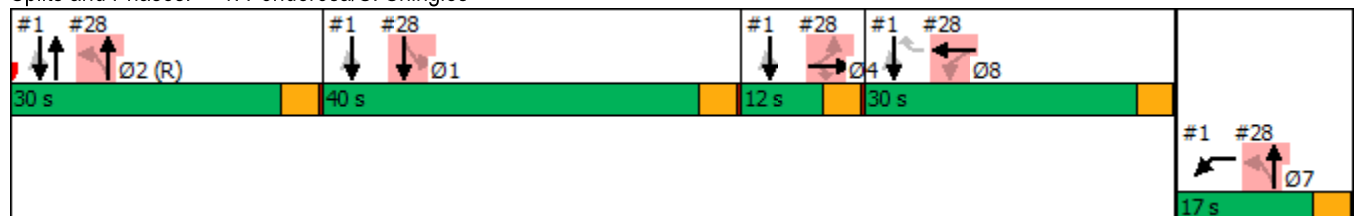
Intersection LOS: E

Intersection Capacity Utilization 32.8%

ICU Level of Service A

Analysis Period (min) 15



















Splits and Phases: 1: Ponderosa/S. Shingles



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

S. Shingle/ US 50/Mother Lode  
Timings

EXISTING PM  
04/28/2023

									
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Configurations									
Traffic Volume (vph)	354	482	232	109	30	429	265	136	160
Future Volume (vph)	354	482	232	109	30	429	265	136	160
Turn Type	Split	NA	Free	Split	NA	pt+ov	NA	custom	NA
Protected Phases	4	4		3	3	3 2	1		2
Permitted Phases			Free					2	
Detector Phase	4	4		3	3	3 2	1	2	2
Switch Phase									
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (%)	25.0%	25.0%		25.0%	25.0%		25.0%	25.0%	25.0%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	Max	Max		Max	Max		Max	Max	Max
Act Effct Green (s)	18.0	18.0	90.0	18.0	18.0	40.5	18.0	18.0	18.0
Actuated g/C Ratio	0.20	0.20	1.00	0.20	0.20	0.45	0.20	0.20	0.20
v/c Ratio	1.09	0.81	0.16	0.33	0.09	0.60	0.58	0.34	1.26
Control Delay	109.6	45.0	0.2	34.0	30.2	17.1	36.4	7.9	169.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.4	0.0
Total Delay	109.6	45.0	0.2	34.0	30.2	17.1	39.2	8.2	169.3
LOS	F	D	A	C	C	B	D	A	F
Approach Delay		57.7			21.0		30.9		169.3
Approach LOS		E			C		C		F

**Intersection Summary**

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 45 (50%), Referenced to phase 2:SBTL, Start of Green

Natural Cycle: 100

Control Type: Pretimed

Maximum v/c Ratio: 1.26

Intersection Signal Delay: 62.8

Intersection LOS: E

Intersection Capacity Utilization 73.0%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 2: S. Shingles & US 50 Off Ramp/Mother Lode



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

S. Shingle/ Durock Rd  
Timings

EXISTING PM  
04/28/2023

	→	←	↑	↓
Lane Group	EBT	WBT	NBT	SBT
Lane Configurations				
Traffic Volume (vph)	12	8	252	316
Future Volume (vph)	12	8	252	316
Turn Type	NA	NA	NA	NA
Protected Phases	4	3	2	1
Permitted Phases				
Detector Phase	4	3	2	1
Switch Phase				
Minimum Initial (s)	6.0	6.0	6.0	12.0
Minimum Split (s)	20.6	10.0	19.3	25.3
Total Split (s)	20.6	10.0	20.0	45.0
Total Split (%)	21.5%	10.5%	20.9%	47.1%
Yellow Time (s)	4.1	3.5	4.8	3.6
All-Red Time (s)	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.0	5.3	4.1
Lead/Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	Min
Act Effct Green (s)	20.7	6.1	21.6	31.2
Actuated g/C Ratio	0.22	0.06	0.23	0.33
v/c Ratio	1.11	0.43	0.47	0.86
Control Delay	116.1	31.2	35.2	42.1
Queue Delay	0.0	0.0	0.0	28.1
Total Delay	116.1	31.2	35.2	70.1
LOS	F	C	D	E
Approach Delay	116.1	31.2	35.2	70.1
Approach LOS	F	C	D	E

**Intersection Summary**

Cycle Length: 95.6

Actuated Cycle Length: 95.6

Offset: 45 (47%), Referenced to phase 2:NBT and 6:, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.11

Intersection Signal Delay: 73.4

Intersection LOS: E

Intersection Capacity Utilization 75.0%

ICU Level of Service D

Analysis Period (min) 15




Splits and Phases: 3: S. Shingles & Durock/Driveway



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Product Dr/ Durock Rd  
 HCM 6th TWSC













EXISTING PM  
 04/28/2023

Intersection						
Int Delay, s/veh	3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	196	26	52	178	25	88
Future Vol, veh/h	196	26	52	178	25	88
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	213	28	57	193	27	96
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	241	0	534	227
Stage 1	-	-	-	-	227	-
Stage 2	-	-	-	-	307	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1326	-	507	812
Stage 1	-	-	-	-	811	-
Stage 2	-	-	-	-	746	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1326	-	483	812
Mov Cap-2 Maneuver	-	-	-	-	483	-
Stage 1	-	-	-	-	811	-
Stage 2	-	-	-	-	710	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.8		11.2	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1		EBT	EBR	WBL	WBT
Capacity (veh/h)	706		-	-	1326	-
HCM Lane V/C Ratio	0.174		-	-	0.043	-
HCM Control Delay (s)	11.2		-	-	7.8	0
HCM Lane LOS	B		-	-	A	A
HCM 95th %tile Q(veh)	0.6		-	-	0.1	-

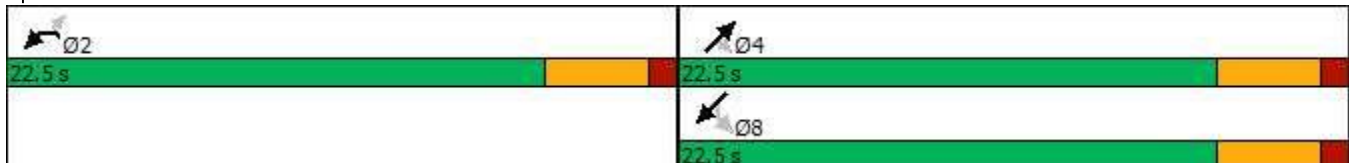
**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Business Dr/ Durock Rd  
Timings

EXISTING PM  
04/28/2023

						
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	102	30	191	62	8	193
Future Volume (vph)	102	30	191	62	8	193
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	2		4			8
Permitted Phases		2		4	8	
Detector Phase	2	2	4	4	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Min	Min	None	None	None	None
Act Effct Green (s)	12.5	12.5	9.0	9.0	9.0	9.0
Actuated g/C Ratio	0.46	0.46	0.33	0.33	0.33	0.33
v/c Ratio	0.24	0.08	0.35	0.12	0.03	0.40
Control Delay	8.3	3.2	8.8	3.0	6.5	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.3	3.2	8.8	3.0	6.5	9.3
LOS	A	A	A	A	A	A
Approach Delay	7.1		7.3			9.2
Approach LOS	A		A			A
Intersection Summary						
Cycle Length: 45						
Actuated Cycle Length: 27.3						
Natural Cycle: 45						
Control Type: Actuated-Uncoordinated						
Maximum v/c Ratio: 0.40						
Intersection Signal Delay: 7.9				Intersection LOS: A		
Intersection Capacity Utilization 23.3%				ICU Level of Service A		
Analysis Period (min) 15						





Splits and Phases: 5: Business Dr & Durock



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Business Dr/ Product Dr  
 HCM 6th TWSC



















EXISTING PM  
 04/28/2023

Intersection													
Int Delay, s/veh	2.7												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR	
Lane Configurations													
Traffic Vol, veh/h	0	57	44	11	43	1	7	2	1	16	1	4	
Future Vol, veh/h	0	57	44	11	43	1	7	2	1	16	1	4	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None	
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	90	90	90	86	86	86	42	42	42	66	66	66	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	63	49	13	50	1	17	5	2	24	2	6	
Major/Minor	Major1		Major2			Minor2			Minor1				
Conflicting Flow All	51	0	0	112	0	0	169	189	51	168	165	88	
Stage 1	-	-	-	-	-	-	77	77	-	88	88	-	
Stage 2	-	-	-	-	-	-	92	112	-	80	77	-	
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22	
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-	
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318	
Pot Cap-1 Maneuver	1555	-	-	1478	-	-	795	706	1017	796	728	970	
Stage 1	-	-	-	-	-	-	932	831	-	920	822	-	
Stage 2	-	-	-	-	-	-	915	803	-	929	831	-	
Platoon blocked, %		-	-		-	-							
Mov Cap-1 Maneuver	1555	-	-	1478	-	-	783	700	1017	785	721	970	
Mov Cap-2 Maneuver	-	-	-	-	-	-	783	700	-	785	721	-	
Stage 1	-	-	-	-	-	-	932	824	-	920	822	-	
Stage 2	-	-	-	-	-	-	908	803	-	913	824	-	
Approach	NB		SB			NE			SW				
HCM Control Delay, s	0		1.5			9.7			9.6				
HCM LOS						A			A				
Minor Lane/Major Mvmt	NELn1	NBL	NBT	NBR	SBL	SBT	SBRSWLn1						
Capacity (veh/h)	782	1555	-	-	1478	-	-	811					
HCM Lane V/C Ratio	0.03	-	-	-	0.009	-	-	0.039					
HCM Control Delay (s)	9.7	0	-	-	7.5	0	-	9.6					
HCM Lane LOS	A	A	-	-	A	A	-	A					
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1					

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Cameron Park/Coach  
Timings

EXISTING PM  
04/28/2023

									
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	490	10	6	78	31	495	57	355	445
Future Volume (vph)	490	10	6	78	31	495	57	355	445
Turn Type	Split	NA	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	3	3	4		5	2	1	6	
Permitted Phases				4					6
Detector Phase	3	3	4	4	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	2.0	2.0	2.0	2.0	4.0	3.0	4.0	3.0	3.0
Minimum Split (s)	10.0	10.0	20.5	20.5	9.5	18.5	9.5	22.6	22.6
Total Split (s)	15.0	15.0	20.5	20.5	15.0	40.0	17.0	40.0	40.0
Total Split (%)	16.2%	16.2%	22.2%	22.2%	16.2%	43.2%	18.4%	43.2%	43.2%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.9	3.0	3.6	3.6
All-Red Time (s)	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	3.0	3.5	3.5	3.5	4.4	3.5	4.1	4.1
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes		
Recall Mode	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	27.5	27.5	6.2	6.2	6.3	39.8	7.8	43.3	43.3
Actuated g/C Ratio	0.30	0.30	0.07	0.07	0.07	0.43	0.08	0.47	0.47
v/c Ratio	0.58	0.58	0.21	0.53	0.28	0.35	0.44	0.46	0.50
Control Delay	34.7	34.5	43.8	17.7	46.1	19.5	48.6	20.1	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.8
Total Delay	34.7	34.5	43.8	17.7	46.1	19.5	48.6	23.9	4.4
LOS	C	C	D	B	D	B	D	C	A
Approach Delay		34.6	22.6			21.0		15.4	
Approach LOS		C	C			C		B	

**Intersection Summary**

Cycle Length: 92.5

Actuated Cycle Length: 92.5

Offset: 17 (18%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 22.2

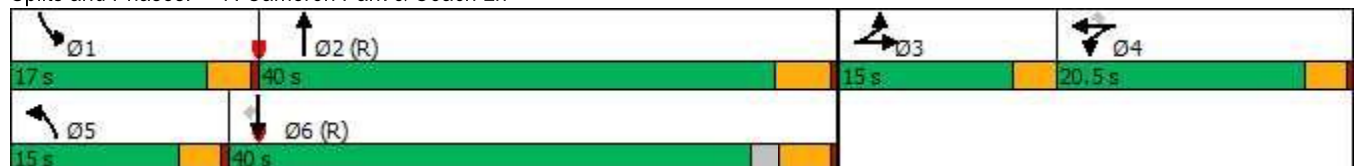
Intersection LOS: C

Intersection Capacity Utilization 53.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: Cameron Park & Coach Ln





















**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Cameron Park/US 50 /Country Club Rd  
Timings

EXISTING PM  
04/28/2023

									
Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	SBT	SBR	Ø4
Lane Configurations									
Traffic Volume (vph)	67	145	173	74	89	727	956	49	
Future Volume (vph)	67	145	173	74	89	727	956	49	
Turn Type	Prot	pt+ov	Prot	NA	Prot	NA	NA	Perm	
Protected Phases	7	4 5	3	8	5	2	6		4
Permitted Phases								6	
Detector Phase	7	4 5	3	8	5	2	6	6	
Switch Phase									
Minimum Initial (s)	4.0		6.0	4.0	4.0	10.0	6.0	6.0	4.0
Minimum Split (s)	8.0		10.0	22.1	8.0	24.0	10.5	10.5	23.5
Total Split (s)	15.0		25.0	22.1	15.0	35.0	35.0	35.0	23.5
Total Split (%)	15.2%		25.4%	22.4%	15.2%	35.5%	35.5%	35.5%	24%
Yellow Time (s)	3.0		3.0	3.6	3.5	3.5	3.9	3.9	3.0
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5		3.5	4.1	4.0	4.0	4.4	4.4	
Lead/Lag	Lead		Lead	Lag	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None		None	None	None	C-Max	C-Max	C-Max	None
Act Effct Green (s)	8.6	31.2	15.4	25.6	9.5	54.4	40.5	40.5	
Actuated g/C Ratio	0.09	0.32	0.16	0.26	0.10	0.55	0.41	0.41	
v/c Ratio	0.52	0.29	0.69	0.91	0.60	0.43	0.73	0.07	
Control Delay	54.2	7.3	51.9	44.5	57.4	15.7	31.3	0.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	54.2	7.3	51.9	44.5	57.4	15.7	31.3	0.2	
LOS	D	A	D	D	E	B	C	A	
Approach Delay				46.5		20.2	29.8		
Approach LOS				D		C	C		

**Intersection Summary**

Cycle Length: 98.5

Actuated Cycle Length: 98.5

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 30.0

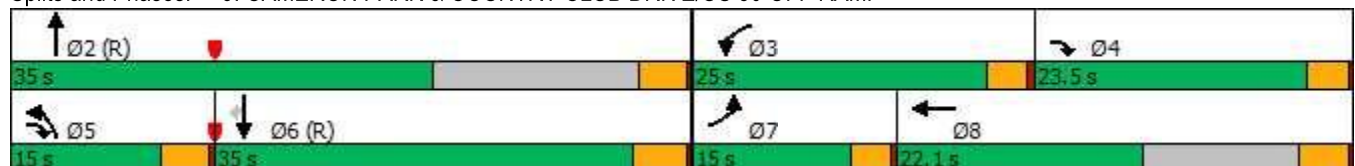
Intersection LOS: C

Intersection Capacity Utilization 76.1%

ICU Level of Service D

Analysis Period (min) 15













Splits and Phases: 9: CAMERON PARK & COUNTRY CLUB DRIVE/US 50 OFF RAMP



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Cameron Park/US 50 E/B Ramp  
Timings

EXISTING PM  
04/28/2023

						
Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	327	759	304	426	530
Future Volume (vph)	2	327	759	304	426	530
Turn Type	NA	Prot	NA	Perm	Prot	NA
Protected Phases	4	4	2		1	6
Permitted Phases				2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	2.0	2.0	3.0	3.0	4.0	3.0
Minimum Split (s)	6.0	6.0	8.0	8.0	7.0	21.0
Total Split (s)	30.0	30.0	35.0	35.0	23.0	35.0
Total Split (%)	34.1%	34.1%	39.8%	39.8%	26.1%	39.8%
Yellow Time (s)	3.0	3.0	3.6	3.6	3.0	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	0.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.6	4.6	3.0	4.6
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	23.5	23.5	36.6	36.6	16.4	55.9
Actuated g/C Ratio	0.27	0.27	0.42	0.42	0.19	0.64
v/c Ratio	0.82	0.57	0.57	0.39	0.73	0.26
Control Delay	44.9	8.9	23.0	4.0	40.4	7.8
Queue Delay	0.0	0.0	3.2	0.5	0.0	0.0
Total Delay	44.9	8.9	26.1	4.5	40.4	7.8
LOS	D	A	C	A	D	A
Approach Delay	27.1		20.0			22.3
Approach LOS	C		B			C

**Intersection Summary**

Cycle Length: 88

Actuated Cycle Length: 88

Offset: 65 (74%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 50

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 22.6

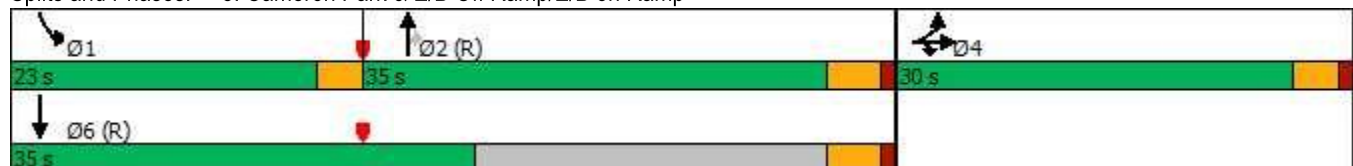
Intersection LOS: C

Intersection Capacity Utilization 62.3%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 8: Cameron Park & E/B Off Ramp/E/B on Ramp













**Appendix C  
Existing Plus Project LOS Calculations**

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Ponderosa/S Shingle/US 50 W/B Ramp  
Timings

EXISTING Plus PROJECT AM

04/29/2023

							
Lane Group	WBL	WBR	NBT	SBT	SBR	Ø1	Ø4
Lane Configurations							
Traffic Volume (vph)	108	176	621	351	483		
Future Volume (vph)	108	176	621	351	483		
Turn Type	Prot	Perm	NA	NA	Perm		
Protected Phases	7		2	1 2 4 8		1	4
Permitted Phases		8			1 2 4 8		
Detector Phase	7	8	2	1 2 4 8	1 2 4 8		
Switch Phase							
Minimum Initial (s)	8.0	10.0	5.0			5.0	3.0
Minimum Split (s)	12.6	22.6	22.6			22.6	9.0
Total Split (s)	17.0	30.0	30.0			40.0	12.0
Total Split (%)	13.2%	23.3%	23.3%			31%	9%
Yellow Time (s)	3.6	3.6	3.6			3.6	3.6
All-Red Time (s)	0.4	0.4	0.4			0.4	1.0
Lost Time Adjust (s)	0.0	0.0	0.0				
Total Lost Time (s)	4.0	4.0	4.0				
Lead/Lag		Lag	Lead			Lag	Lead
Lead-Lag Optimize?		Yes	Yes			Yes	Yes
Recall Mode	None	Min	C-Min			Min	None
Act Effct Green (s)	17.7	21.3	25.7	103.3	103.3		
Actuated g/C Ratio	0.14	0.17	0.20	0.80	0.80		
v/c Ratio	0.48	0.45	0.96	0.26	0.40		
Control Delay	60.7	9.5	76.4	0.4	1.8		
Queue Delay	0.0	88.8	44.2	33.4	50.7		
Total Delay	60.7	98.3	120.7	33.8	52.5		
LOS	E	F	F	C	D		
Approach Delay	84.0		120.7	44.6			
Approach LOS	F		F	D			

**Intersection Summary**

Cycle Length: 129

Actuated Cycle Length: 129

Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 3.27

Intersection Signal Delay: 78.2

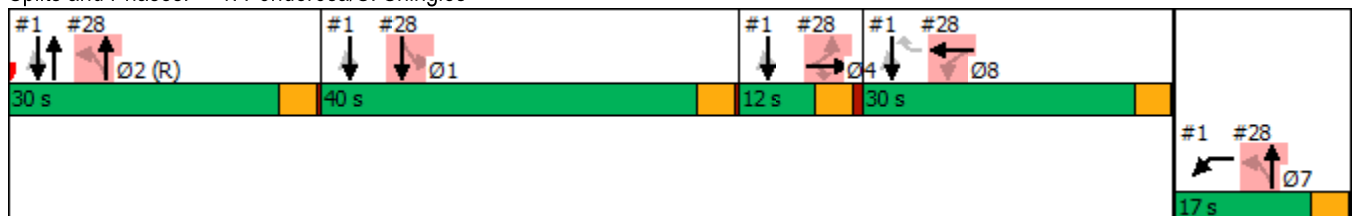
Intersection LOS: E

Intersection Capacity Utilization 34.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: Ponderosa/S. Shingles





















**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

S Shingle/US 50 E/B Ramps/Mother Lode  
 Timings

EXISTING Plus PROJECT AM

04/29/2023

									
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Configurations									
Traffic Volume (vph)	330	425	93	122	13	466	274	66	157
Future Volume (vph)	330	425	93	122	13	466	274	66	157
Turn Type	Split	NA	Free	Split	NA	pt+ov	NA	custom	NA
Protected Phases	4	4		3	3	3 2	1		2
Permitted Phases			Free					2	
Detector Phase	4	4		3	3	3 2	1	2	2
Switch Phase									
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (%)	25.0%	25.0%		25.0%	25.0%		25.0%	25.0%	25.0%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	Max	Max		Max	Max		Max	Max	Max
Act Effct Green (s)	18.0	18.0	90.0	18.0	18.0	40.5	18.0	18.0	18.0
Actuated g/C Ratio	0.20	0.20	1.00	0.20	0.20	0.45	0.20	0.20	0.20
v/c Ratio	1.01	0.70	0.06	0.38	0.04	0.65	0.54	0.17	1.40
Control Delay	89.4	39.6	0.1	34.8	29.5	18.7	35.7	2.0	225.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0
Total Delay	89.4	39.6	0.1	34.8	29.5	18.7	37.9	2.0	225.2
LOS	F	D	A	C	C	B	D	A	F
Approach Delay		55.1			22.2		32.2		225.2
Approach LOS		E			C		C		F

**Intersection Summary**

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 45 (50%), Referenced to phase 2:SBTL, Start of Green

Natural Cycle: 100

Control Type: Pretimed

Maximum v/c Ratio: 1.40

Intersection Signal Delay: 77.0

Intersection LOS: E

Intersection Capacity Utilization 73.8%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 2: S. Shingles & US 50 Off Ramp/Mother Lode



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

S Shingle/Durock  
Timings

EXISTING Plus PROJECT AM  
04/29/2023

	→	←	↑	↓
Lane Group	EBT	WBT	NBT	SBT
Lane Configurations				
Traffic Volume (vph)	10	8	233	170
Future Volume (vph)	10	8	233	170
Turn Type	NA	NA	NA	NA
Protected Phases	4	3	2	1
Permitted Phases				
Detector Phase	4	3	2	1
Switch Phase				
Minimum Initial (s)	6.0	6.0	6.0	12.0
Minimum Split (s)	20.6	10.0	19.3	25.3
Total Split (s)	20.6	10.0	20.0	45.0
Total Split (%)	21.5%	10.5%	20.9%	47.1%
Yellow Time (s)	4.1	3.5	4.8	3.6
All-Red Time (s)	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.0	5.3	4.1
Lead/Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	Min
Act Effct Green (s)	14.1	6.1	36.6	22.8
Actuated g/C Ratio	0.15	0.06	0.38	0.24
v/c Ratio	0.79	0.40	0.26	0.83
Control Delay	58.7	31.8	24.0	42.7
Queue Delay	0.0	0.0	0.0	0.9
Total Delay	58.7	31.8	24.0	43.6
LOS	E	C	C	D
Approach Delay	58.7	31.8	24.0	43.6
Approach LOS	E	C	C	D

**Intersection Summary**

Cycle Length: 95.6

Actuated Cycle Length: 95.6

Offset: 45 (47%), Referenced to phase 2:NBT and 6:, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 39.2

Intersection LOS: D

Intersection Capacity Utilization 57.8%

ICU Level of Service B

Analysis Period (min) 15




Splits and Phases: 3: S. Shingles & Durock/Driveway



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Durock/Product  
 HCM 6th TWSC

EXISTING Plus PROJECT AM  
 04/29/2023













Intersection						
Int Delay, s/veh	2.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	116	20	60	158	20	39
Future Vol, veh/h	116	20	60	158	20	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	126	22	65	172	22	42
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	148	0	439	137
Stage 1	-	-	-	-	137	-
Stage 2	-	-	-	-	302	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1434	-	575	911
Stage 1	-	-	-	-	890	-
Stage 2	-	-	-	-	750	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1434	-	546	911
Mov Cap-2 Maneuver	-	-	-	-	546	-
Stage 1	-	-	-	-	890	-
Stage 2	-	-	-	-	713	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		2.1		10.3	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	743	-	-	1434	-	
HCM Lane V/C Ratio	0.086	-	-	0.045	-	
HCM Control Delay (s)	10.3	-	-	7.6	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-	

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Durock/Business  
Timings

EXISTING Plus PROJECT AM

04/29/2023

						
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	26	8	120	47	6	171
Future Volume (vph)	26	8	120	47	6	171
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	7.0	7.0	4.7	7.0
Minimum Split (s)	23.6	23.6	23.3	23.3	9.0	22.5
Total Split (s)	24.0	24.0	24.0	24.0	9.0	37.0
Total Split (%)	39.3%	39.3%	39.3%	39.3%	14.8%	60.7%
Yellow Time (s)	3.6	3.6	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.3	4.3	4.3	4.3
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	None
Act Effct Green (s)	5.4	5.4	23.0	23.0	4.8	22.7
Actuated g/C Ratio	0.18	0.18	0.77	0.77	0.16	0.76
v/c Ratio	0.15	0.05	0.09	0.04	0.03	0.15
Control Delay	12.7	7.4	5.1	3.1	12.8	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.7	7.4	5.1	3.1	12.8	2.8
LOS	B	A	A	A	B	A
Approach Delay	11.5		4.5			3.2
Approach LOS	B		A			A

**Intersection Summary**

Cycle Length: 61

Actuated Cycle Length: 29.7

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.15

Intersection Signal Delay: 4.8

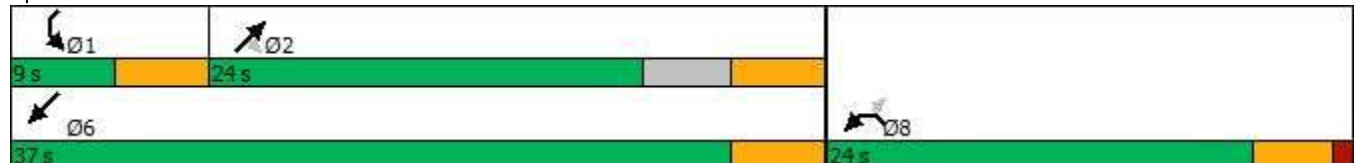
Intersection LOS: A

Intersection Capacity Utilization 20.6%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: Business Dr & Durock





**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Product/Business  
 HCM 6th TWSC

EXISTING Plus PROJECT AM  
 04/29/2023

Intersection												
Int Delay, s/veh	5.3											
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	11	3	2	45	37	2	2	2	2	55	27
Future Vol, veh/h	1	11	3	2	45	37	2	2	2	2	55	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	60	60	60	62	62	62	25	25	25	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	18	5	3	73	60	8	8	8	3	92	45

Major/Minor	Major1			Major2			Minor2			Minor1		
Conflicting Flow All	133	0	0	23	0	0	202	136	103	142	164	21
Stage 1	-	-	-	-	-	-	109	109	-	25	25	-
Stage 2	-	-	-	-	-	-	93	27	-	117	139	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1452	-	-	1592	-	-	756	755	952	828	729	1056
Stage 1	-	-	-	-	-	-	896	805	-	993	874	-
Stage 2	-	-	-	-	-	-	914	873	-	888	782	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1452	-	-	1592	-	-	652	753	952	812	727	1056
Mov Cap-2 Maneuver	-	-	-	-	-	-	652	753	-	812	727	-
Stage 1	-	-	-	-	-	-	895	803	-	992	873	-
Stage 2	-	-	-	-	-	-	782	872	-	870	780	-

Approach	NB			SB			NE			SW		
HCM Control Delay, s	0.5			0.2			9.8			10.4		
HCM LOS							A			B		



















Minor Lane/Major Mvmt	NELn1	NBL	NBT	NBR	SBL	SBT	SBR	SWLn1
Capacity (veh/h)	767	1452	-	-	1592	-	-	810
HCM Lane V/C Ratio	0.031	0.001	-	-	0.002	-	-	0.173
HCM Control Delay (s)	9.8	7.5	0	-	7.3	0	-	10.4
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.6

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Cameron Park/Coach  
Timings

EXISTING Plus PROJECT AM

04/29/2023

									
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	272	8	6	39	37	190	54	332	328
Future Volume (vph)	272	8	6	39	37	190	54	332	328
Turn Type	Split	NA	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	3	3	4		5	2	1	6	
Permitted Phases				4					6
Detector Phase	3	3	4	4	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	2.0	2.0	2.0	2.0	4.0	3.0	4.0	3.0	3.0
Minimum Split (s)	10.0	10.0	20.5	20.5	9.5	18.5	9.5	22.6	22.6
Total Split (s)	15.0	15.0	20.5	20.5	15.0	40.0	17.0	40.0	40.0
Total Split (%)	16.2%	16.2%	22.2%	22.2%	16.2%	43.2%	18.4%	43.2%	43.2%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.9	3.0	3.6	3.6
All-Red Time (s)	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	3.0	3.5	3.5	3.5	4.4	3.5	4.1	4.1
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes		
Recall Mode	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	14.6	14.6	5.2	5.2	6.6	53.9	7.6	56.9	56.9
Actuated g/C Ratio	0.16	0.16	0.06	0.06	0.07	0.58	0.08	0.62	0.62
v/c Ratio	0.66	0.63	0.12	0.31	0.32	0.10	0.42	0.33	0.33
Control Delay	48.1	43.9	43.4	7.6	46.7	11.1	48.3	12.4	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.5
Total Delay	48.1	43.9	43.4	7.6	46.7	11.1	48.3	13.5	2.9
LOS	D	D	D	A	D	B	D	B	A
Approach Delay		46.0	14.0			16.8		11.2	
Approach LOS		D	B			B		B	

**Intersection Summary**

Cycle Length: 92.5

Actuated Cycle Length: 92.5

Offset: 17 (18%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 20.5

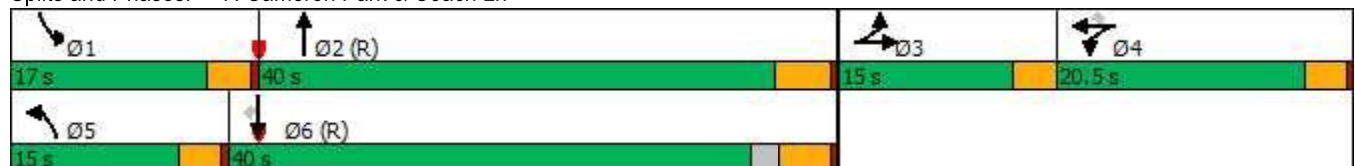
Intersection LOS: C

Intersection Capacity Utilization 46.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: Cameron Park & Coach Ln



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Cameron Park/US 50 E/B Ramp  
Timings

EXISTING Plus PROJECT AM

04/29/2023

	→	↘	↑	↗	↘	↓
Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↗	↕	↗	↘↗	↕
Traffic Volume (vph)	3	256	321	146	381	401
Future Volume (vph)	3	256	321	146	381	401
Turn Type	NA	Prot	NA	Perm	Prot	NA
Protected Phases	4	4	2		1	6
Permitted Phases				2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	2.0	2.0	3.0	3.0	4.0	3.0
Minimum Split (s)	6.0	6.0	8.0	8.0	7.0	21.0
Total Split (s)	30.0	30.0	35.0	35.0	23.0	35.0
Total Split (%)	34.1%	34.1%	39.8%	39.8%	26.1%	39.8%
Yellow Time (s)	3.0	3.0	3.6	3.6	3.0	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	0.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.6	4.6	3.0	4.6
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	20.2	20.2	40.9	40.9	15.3	59.2
Actuated g/C Ratio	0.23	0.23	0.46	0.46	0.17	0.67
v/c Ratio	0.73	0.50	0.21	0.20	0.69	0.18
Control Delay	41.5	6.3	16.3	4.0	40.2	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.5	6.3	16.3	4.0	40.2	6.2
LOS	D	A	B	A	D	A
Approach Delay	24.0		12.4			22.8
Approach LOS	C		B			C

**Intersection Summary**

Cycle Length: 88

Actuated Cycle Length: 88

Offset: 65 (74%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 20.4

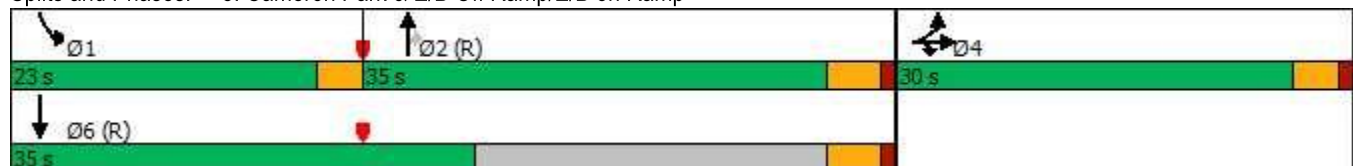
Intersection LOS: C

Intersection Capacity Utilization 44.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 8: Cameron Park & E/B Off Ramp/E/B on Ramp



















**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Cameron Park/US 50/Country Club  
Timings

EXISTING Plus PROJECT AM

04/29/2023

									
Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	SBT	SBR	Ø4
Lane Configurations									
Traffic Volume (vph)	45	133	167	48	40	364	786	35	
Future Volume (vph)	45	133	167	48	40	364	786	35	
Turn Type	Prot	pt+ov	Prot	NA	Prot	NA	NA	Perm	
Protected Phases	7	4 5	3	8	5	2	6		4
Permitted Phases								6	
Detector Phase	7	4 5	3	8	5	2	6	6	
Switch Phase									
Minimum Initial (s)	4.0		6.0	4.0	4.0	10.0	6.0	6.0	4.0
Minimum Split (s)	8.0		10.0	22.1	8.0	24.0	10.5	10.5	23.5
Total Split (s)	15.0		25.0	22.1	15.0	35.0	35.0	35.0	23.5
Total Split (%)	15.2%		25.4%	22.4%	15.2%	35.5%	35.5%	35.5%	24%
Yellow Time (s)	3.0		3.0	3.6	3.5	3.5	3.9	3.9	3.0
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5		3.5	4.1	4.0	4.0	4.4	4.4	
Lead/Lag	Lead		Lead	Lag	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None		None	None	None	C-Max	C-Max	C-Max	None
Act Effct Green (s)	7.4	18.7	15.1	15.8	7.6	65.3	53.3	53.3	
Actuated g/C Ratio	0.08	0.19	0.15	0.16	0.08	0.66	0.54	0.54	
v/c Ratio	0.40	0.37	0.69	0.76	0.35	0.18	0.46	0.04	
Control Delay	51.6	8.5	52.0	16.0	49.3	7.6	16.5	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	51.6	8.5	52.0	16.0	49.3	7.6	16.5	0.1	
LOS	D	A	D	B	D	A	B	A	
Approach Delay				26.8		11.8	15.8		
Approach LOS				C		B	B		

**Intersection Summary**

Cycle Length: 98.5

Actuated Cycle Length: 98.5

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 18.4

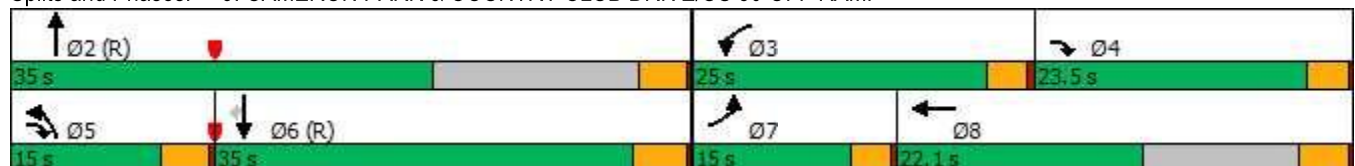
Intersection LOS: B

Intersection Capacity Utilization 66.0%

ICU Level of Service C

Analysis Period (min) 15











Splits and Phases: 9: CAMERON PARK & COUNTRY CLUB DRIVE/US 50 OFF RAMP



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Ponderosa/ S Shingle  
Timings

EXISTING + Project PM  
04/29/2023

							
Lane Group	WBL	WBR	NBT	SBT	SBR	Ø1	Ø4
Lane Configurations							
Traffic Volume (vph)	121	115	647	288	305		
Future Volume (vph)	121	115	647	288	305		
Turn Type	Prot	Perm	NA	NA	Perm		
Protected Phases	7		2	1 2 4 8		1	4
Permitted Phases		8			1 2 4 8		
Detector Phase	7	8	2	1 2 4 8	1 2 4 8		
Switch Phase							
Minimum Initial (s)	8.0	10.0	5.0			5.0	3.0
Minimum Split (s)	12.6	22.6	18.0			29.0	9.0
Total Split (s)	17.0	30.0	30.0			40.0	12.0
Total Split (%)	13.2%	23.3%	23.3%			31%	9%
Yellow Time (s)	3.6	3.6	3.6			3.6	3.6
All-Red Time (s)	0.4	0.4	0.4			0.4	0.4
Lost Time Adjust (s)	0.0	0.0	0.0				
Total Lost Time (s)	4.0	4.0	4.0				
Lead/Lag		Lag	Lead			Lag	Lead
Lead-Lag Optimize?		Yes	Yes			Yes	Yes
Recall Mode	None	Min	C-Min			Min	None
Act Effct Green (s)	18.0	20.5	26.5	103.0	103.0		
Actuated g/C Ratio	0.14	0.16	0.21	0.80	0.80		
v/c Ratio	0.53	0.35	0.97	0.21	0.25		
Control Delay	61.8	10.1	77.4	0.4	0.0		
Queue Delay	0.0	95.8	41.2	4.7	5.3		
Total Delay	61.8	105.9	118.5	5.1	5.3		
LOS	E	F	F	A	A		
Approach Delay	83.3		118.5	5.2			
Approach LOS	F		F	A			

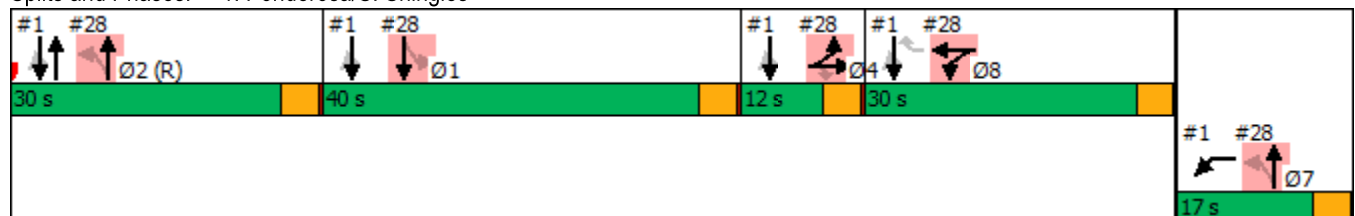
**Intersection Summary**

Cycle Length: 129  
Actuated Cycle Length: 129  
Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Green  
Natural Cycle: 135  
Control Type: Actuated-Coordinated  
Maximum v/c Ratio: 1.75  
Intersection Signal Delay: 67.3  
Intersection Capacity Utilization 32.9%  
Analysis Period (min) 15

Intersection LOS: E

ICU Level of Service A



















Splits and Phases: 1: Ponderosa/S. Shingles



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

S Shingle/US 50/Mother Lode  
Timings

EXISTING + Project PM  
04/29/2023

									
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Configurations									
Traffic Volume (vph)	482	354	233	30	109	429	269	138	160
Future Volume (vph)	482	354	233	30	109	429	269	138	160
Turn Type	Split	NA	Free	Split	NA	pt+ov	NA	custom	NA
Protected Phases	4	4		3	3	3 2	1		2
Permitted Phases			Free					2	
Detector Phase	4	4		3	3	3 2	1	2	2
Switch Phase									
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (%)	25.0%	25.0%		25.0%	25.0%		25.0%	25.0%	25.0%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	Max	Max		Max	Max		Max	Max	Max
Act Effct Green (s)	18.0	18.0	90.0	18.0	18.0	40.5	18.0	18.0	18.0
Actuated g/C Ratio	0.20	0.20	1.00	0.20	0.20	0.45	0.20	0.20	0.20
v/c Ratio	1.48	0.66	0.13	0.09	0.32	0.61	0.59	0.34	1.26
Control Delay	260.4	37.2	0.2	30.3	33.5	18.7	36.6	7.8	169.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.4	0.0
Total Delay	260.4	37.2	0.2	30.3	33.5	18.7	39.6	8.2	169.3
LOS	F	D	A	C	C	B	D	A	F
Approach Delay		131.7			22.1		31.2		169.3
Approach LOS		F			C		C		F

**Intersection Summary**

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 45 (50%), Referenced to phase 2:SBTL, Start of Green

Natural Cycle: 120

Control Type: Pretimed

Maximum v/c Ratio: 1.48

Intersection Signal Delay: 93.7

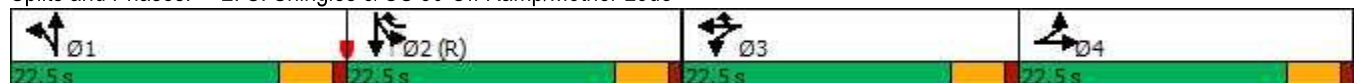
Intersection LOS: F

Intersection Capacity Utilization 79.1%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 2: S. Shingles & US 50 Off Ramp/Mother Lode



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

S Shingle/Durock  
Timings

EXISTING + Project PM  
04/29/2023

	→	←	↑	↓
Lane Group	EBT	WBT	NBT	SBT
Lane Configurations				
Traffic Volume (vph)	12	8	252	316
Future Volume (vph)	12	8	252	316
Turn Type	NA	NA	NA	NA
Protected Phases	4	3	2	1
Permitted Phases				
Detector Phase	4	3	2	1
Switch Phase				
Minimum Initial (s)	6.0	6.0	6.0	12.0
Minimum Split (s)	20.6	10.0	19.3	25.3
Total Split (s)	20.6	10.0	20.0	45.0
Total Split (%)	21.5%	10.5%	20.9%	47.1%
Yellow Time (s)	4.1	3.5	4.8	3.6
All-Red Time (s)	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.0	5.3	4.1
Lead/Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	Min
Act Effct Green (s)	20.7	6.1	21.6	31.2
Actuated g/C Ratio	0.22	0.06	0.23	0.33
v/c Ratio	1.14	0.43	0.48	0.86
Control Delay	125.1	31.3	35.3	42.1
Queue Delay	0.0	0.0	0.0	29.2
Total Delay	125.1	31.3	35.3	71.4
LOS	F	C	D	E
Approach Delay	125.1	31.3	35.3	71.4
Approach LOS	F	C	D	E

**Intersection Summary**

Cycle Length: 95.6

Actuated Cycle Length: 95.6

Offset: 45 (47%), Referenced to phase 2:NBT and 6:, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.14

Intersection Signal Delay: 77.0

Intersection LOS: E

Intersection Capacity Utilization 75.7%

ICU Level of Service D

Analysis Period (min) 15




Splits and Phases: 3: S. Shingles & Durock/Driveway



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Durock/Product  
 HCM 6th TWSC

EXISTING + Project PM  
 04/29/2023













Intersection						
Int Delay, s/veh	3.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	196	26	54	178	25	97
Future Vol, veh/h	196	26	54	178	25	97
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	213	28	59	193	27	105
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	241	0	538	227
Stage 1	-	-	-	-	227	-
Stage 2	-	-	-	-	311	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1326	-	504	812
Stage 1	-	-	-	-	811	-
Stage 2	-	-	-	-	743	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1326	-	479	812
Mov Cap-2 Maneuver	-	-	-	-	479	-
Stage 1	-	-	-	-	811	-
Stage 2	-	-	-	-	706	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.8		11.2	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	711	-	-	1326	-	
HCM Lane V/C Ratio	0.187	-	-	0.044	-	
HCM Control Delay (s)	11.2	-	-	7.8	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.7	-	-	0.1	-	



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Durock/Business  
Timings

EXISTING + Project PM  
04/29/2023

						
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	112	30	191	65	8	193
Future Volume (vph)	112	30	191	65	8	193
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	7.0	7.0	5.0	7.0
Minimum Split (s)	23.6	23.6	23.3	23.3	9.3	11.3
Total Split (s)	24.0	24.0	24.0	24.0	9.3	37.0
Total Split (%)	39.3%	39.3%	39.3%	39.3%	15.2%	60.7%
Yellow Time (s)	3.6	3.6	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.3	4.3	4.3	4.3
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	None
Act Effct Green (s)	8.8	8.8	18.0	18.0	5.2	19.4
Actuated g/C Ratio	0.26	0.26	0.54	0.54	0.15	0.58
v/c Ratio	0.29	0.08	0.21	0.08	0.03	0.21
Control Delay	12.5	5.4	8.5	3.6	14.9	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.5	5.4	8.5	3.6	14.9	6.1
LOS	B	A	A	A	B	A
Approach Delay	11.0		7.3			6.4
Approach LOS	B		A			A

**Intersection Summary**

Cycle Length: 61

Actuated Cycle Length: 33.6

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.29

Intersection Signal Delay: 7.9

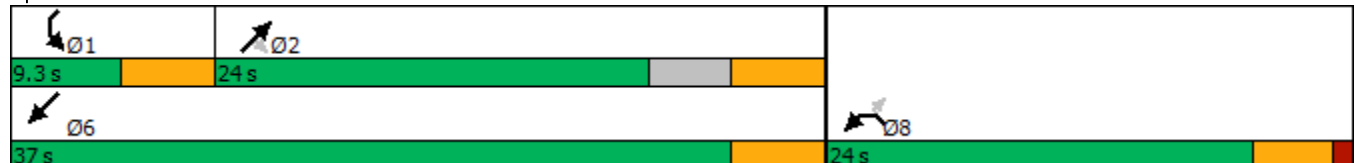
Intersection LOS: A

Intersection Capacity Utilization 23.8%

ICU Level of Service A

Analysis Period (min) 15





Splits and Phases: 5: Business Dr & Durock



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Product/Business  
 HCM 6th TWSC



















EXISTING + Project PM  
 04/29/2023

Intersection												
Int Delay, s/veh	4.6											
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	57	44	11	43	3	17	11	1	16	4	4
Future Vol, veh/h	0	57	44	11	43	3	17	11	1	16	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	60	60	60	62	62	62	25	25	25	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	95	73	18	69	5	68	44	4	27	7	7
Major/Minor	Major1			Major2			Minor2			Minor1		
Conflicting Flow All	74	0	0	168	0	0	247	276	72	264	242	132
Stage 1	-	-	-	-	-	-	108	108	-	132	132	-
Stage 2	-	-	-	-	-	-	139	168	-	132	110	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1526	-	-	1410	-	-	707	632	990	689	660	917
Stage 1	-	-	-	-	-	-	897	806	-	871	787	-
Stage 2	-	-	-	-	-	-	864	759	-	871	804	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1526	-	-	1410	-	-	689	624	990	643	651	917
Mov Cap-2 Maneuver	-	-	-	-	-	-	689	624	-	643	651	-
Stage 1	-	-	-	-	-	-	897	796	-	871	787	-
Stage 2	-	-	-	-	-	-	850	759	-	809	794	-
Approach	NB			SB			NE			SW		
HCM Control Delay, s	0			1.5			11.5			10.6		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NELn1	NBL	NBT	NBR	SBL	SBT	SBRSWLn1					
Capacity (veh/h)	670	1526	-	-	1410	-	-	-	678			
HCM Lane V/C Ratio	0.173	-	-	-	0.013	-	-	-	0.059			
HCM Control Delay (s)	11.5	0	-	-	7.6	0	-	-	10.6			
HCM Lane LOS	B	A	-	-	A	A	-	-	B			
HCM 95th %tile Q(veh)	0.6	0	-	-	0	-	-	-	0.2			

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Cameron Park/Coach  
Timings

EXISTING + Project PM  
04/29/2023

									
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	511	10	6	82	31	537	57	371	445
Future Volume (vph)	511	10	6	82	31	537	57	371	445
Turn Type	Split	NA	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	3	3	4		5	2	1	6	
Permitted Phases				4					6
Detector Phase	3	3	4	4	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	2.0	2.0	2.0	2.0	4.0	3.0	4.0	3.0	3.0
Minimum Split (s)	10.0	10.0	20.5	20.5	9.5	18.5	9.5	22.6	22.6
Total Split (s)	15.0	15.0	20.5	20.5	15.0	40.0	17.0	40.0	40.0
Total Split (%)	16.2%	16.2%	22.2%	22.2%	16.2%	43.2%	18.4%	43.2%	43.2%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.9	3.0	3.6	3.6
All-Red Time (s)	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	3.0	3.5	3.5	3.5	4.4	3.5	4.1	4.1
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes		
Recall Mode	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	28.5	28.5	6.3	6.3	6.3	37.1	7.8	40.7	40.7
Actuated g/C Ratio	0.31	0.31	0.07	0.07	0.07	0.40	0.08	0.44	0.44
v/c Ratio	0.58	0.58	0.20	0.54	0.28	0.41	0.44	0.52	0.52
Control Delay	34.6	34.2	43.6	17.6	46.1	21.2	48.6	22.0	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0	0.9
Total Delay	34.6	34.2	43.6	17.6	46.1	21.2	48.6	31.0	4.7
LOS	C	C	D	B	D	C	D	C	A
Approach Delay		34.4	22.3			22.5		18.7	
Approach LOS		C	C			C		B	

**Intersection Summary**

Cycle Length: 92.5

Actuated Cycle Length: 92.5

Offset: 17 (18%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 24.0

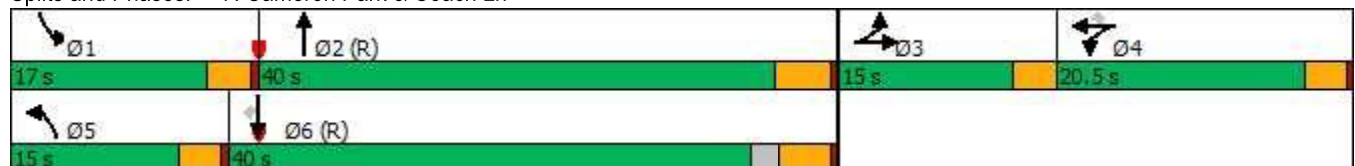
Intersection LOS: C

Intersection Capacity Utilization 54.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: Cameron Park & Coach Ln



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Cameron Park/US 50 E/B Ramp  
Timings

EXISTING + Project PM  
04/29/2023

	→	↘	↑	↗	↙	↓
Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↗	↕	↗	↙↘	↕
Traffic Volume (vph)	2	327	746	307	421	527
Future Volume (vph)	2	327	746	307	421	527
Turn Type	NA	Prot	NA	Perm	Prot	NA
Protected Phases	4	4	2		1	6
Permitted Phases				2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	2.0	2.0	3.0	3.0	4.0	3.0
Minimum Split (s)	6.0	6.0	8.0	8.0	7.0	21.0
Total Split (s)	30.0	30.0	35.0	35.0	23.0	35.0
Total Split (%)	34.1%	34.1%	39.8%	39.8%	26.1%	39.8%
Yellow Time (s)	3.0	3.0	3.6	3.6	3.0	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	0.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.6	4.6	3.0	4.6
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	23.5	23.5	36.6	36.6	16.3	55.9
Actuated g/C Ratio	0.27	0.27	0.42	0.42	0.19	0.64
v/c Ratio	0.82	0.57	0.56	0.39	0.72	0.25
Control Delay	44.9	8.8	22.7	4.0	40.3	7.8
Queue Delay	0.0	0.0	2.9	0.5	0.0	0.0
Total Delay	44.9	8.8	25.6	4.5	40.3	7.8
LOS	D	A	C	A	D	A
Approach Delay	27.1		19.4			22.2
Approach LOS	C		B			C

**Intersection Summary**

Cycle Length: 88

Actuated Cycle Length: 88

Offset: 65 (74%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 50

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 22.4

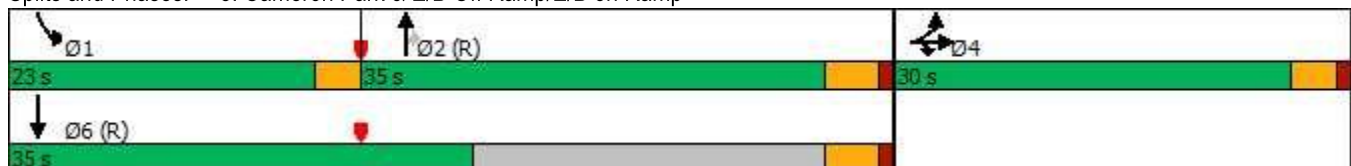
Intersection LOS: C

Intersection Capacity Utilization 61.8%

ICU Level of Service B

Analysis Period (min) 15

















Splits and Phases: 8: Cameron Park & E/B Off Ramp/E/B on Ramp



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

Cameron Park/US 50/Country Club  
Timings

EXISTING + Project PM  
04/29/2023

									
Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	SBT	SBR	Ø4
Lane Configurations									
Traffic Volume (vph)	67	145	173	74	89	713	958	49	
Future Volume (vph)	67	145	173	74	89	713	958	49	
Turn Type	Prot	pt+ov	Prot	NA	Prot	NA	NA	Perm	
Protected Phases	7	4 5	3	8	5	2	6		4
Permitted Phases								6	
Detector Phase	7	4 5	3	8	5	2	6	6	
Switch Phase									
Minimum Initial (s)	4.0		6.0	4.0	4.0	10.0	6.0	6.0	4.0
Minimum Split (s)	8.0		10.0	22.1	8.0	24.0	10.5	10.5	23.5
Total Split (s)	15.0		25.0	22.1	15.0	35.0	35.0	35.0	23.5
Total Split (%)	15.2%		25.4%	22.4%	15.2%	35.5%	35.5%	35.5%	24%
Yellow Time (s)	3.0		3.0	3.6	3.5	3.5	3.9	3.9	3.0
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5		3.5	4.1	4.0	4.0	4.4	4.4	
Lead/Lag	Lead		Lead	Lag	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None		None	None	None	C-Max	C-Max	C-Max	None
Act Effct Green (s)	8.6	31.1	15.4	25.5	9.5	54.5	40.6	40.6	
Actuated g/C Ratio	0.09	0.32	0.16	0.26	0.10	0.55	0.41	0.41	
v/c Ratio	0.52	0.29	0.69	0.91	0.60	0.42	0.73	0.07	
Control Delay	54.2	7.4	51.9	43.8	57.4	15.5	31.3	0.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	54.2	7.4	51.9	43.8	57.4	15.5	31.3	0.2	
LOS	D	A	D	D	E	B	C	A	
Approach Delay				46.0		20.1	29.8		
Approach LOS				D		C	C		

**Intersection Summary**

Cycle Length: 98.5

Actuated Cycle Length: 98.5

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 29.9

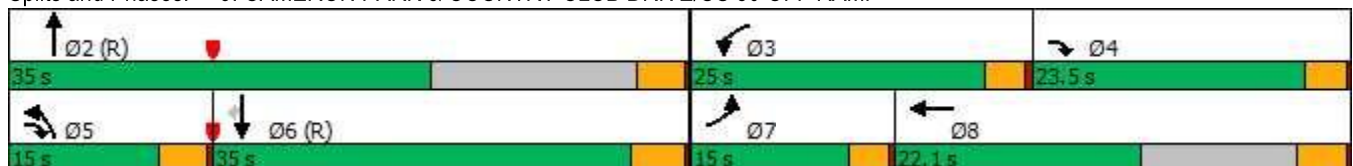
Intersection LOS: C

Intersection Capacity Utilization 76.2%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 9: CAMERON PARK & COUNTRY CLUB DRIVE/US 50 OFF RAMP



**Appendix D  
Land Use and VMT Policies**

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
**OFFICE/WAREHOUSE BUILDINGS**  
**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

**ATTACHMENT A: REVIEW OF POLICIES THAT ARE SUPPORTIVE OF VMT MITIGATION MEASURES**

Plan/Document	Element	Policy	Description
El Dorado County General Plan	Land Use	2.1.1.2	Establish Community Regions to define those areas which are appropriate for the highest intensity of self-sustaining compact urban-type development or suburban type development within the County based on the municipal spheres of influence, availability of infrastructure, public services, major transportation corridors and travel patterns, the location of major topographic patterns and features, and the ability to provide and maintain appropriate transitions at Community Region boundaries. These boundaries shall be shown on the general plan land use map.
		2.1.1.3	Mixed use developments which combine commercial and residential uses in a single project are permissible and encouraged within Community Regions. Within Community Regions, the mixed-uses may occur vertically and/or horizontally. In mixed use projects, the maximum residential density shall be 20 dwelling units per acre within Community Regions. The residential component of a mixed use project may include a full range of single and/or multifamily design concepts. The maximum residential density of 20 dwelling units per acre may only be achieved where adequate infrastructure, such as water, sewer and roadway are available or can be provided concurrent with development
		2.1.2.2	Rural Center boundaries establish areas of higher intensity development throughout the rural areas of the County based on the availability of infrastructure, public services, existing uses, parcelization, impact on natural resources, etc. These boundaries shall be shown on the general plan land use map
		2.1.2.5	Mixed use developments which combine commercial and residential uses in a single project are permissible and encouraged within Rural Centers. Within Rural Centers, the mixed uses may occur either vertically and/or horizontally. The maximum residential density shall be 10 dwelling units per acre in Rural Centers in identified mixed use areas as defined in the Zoning Ordinance. The residential component of a mixed use project may include a full range of single and/or multifamily design concepts. The maximum residential density of 10 dwelling units per acre may only be achieved where adequate infrastructure, such as water, sewer and roadway are available or can be provided concurrent with development.
		2.1.4.1	Facilitate increased density and intensity of development and revitalization in identified Opportunity Areas.
		2.1.4.3	Utilize incentives to promote infill development, revitalization, rehabilitation, and mixed-use projects in designated Opportunity Areas.
		2.2.3.1	The Planned Development (-PD) Combining Zone District, to be implemented through the zoning ordinance, shall allow residential, commercial, and industrial land uses consistent with the density specified by the underlying zoning district with which it is combined. Primary emphasis shall be placed on furthering uses and/or design that (1) provide a public or common benefit on- or off-site, (2) cluster intensive land uses or lots to conform to the natural topography, (3) minimize impacts on various natural and agricultural resources, (4) avoid cultural resources where feasible, (5) minimize public health concerns, (6) minimize aesthetic concerns, and (7) promote the public health, safety, and welfare. A goal statement shall accompany each application specifically stating how the proposed project meets these criteria.



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC**  
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**ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

**ATTACHMENT A: REVIEW OF POLICIES THAT ARE SUPPORTIVE OF VMT MITIGATION MEASURES**

Plan/Document	Element	Policy	Description
El Dorado County General Plan	Land Use	2.2.4.1	Residential Planned Developments which provide a minimum of 30% commonly owned publicly dedicated open space shall be allowed an open space density bonus of additional residential units, in accordance with A through C, for the provision of lands set aside for open space, wildlife habitat areas, parks (parkland provided in excess of that required by the Quimby Act), ball fields, or other uses. Developable land as used herein means land which is included in the calculation of density for a standard subdivision, which excludes bodies of water (lakes, rivers and perennial streams) measured at the ordinary high water mark or spillway elevation for lakes and the two-year storm event for rivers and perennial streams.
		2.4.1.4	Strip commercial development shall be precluded in favor of clustered contiguous facilities. Existing strip commercial areas shall be developed with common and continuous landscaping along the street frontage, shall utilize common driveways, and accommodate parcel-to-parcel internal automobile and non-automobile circulation where possible.
		2.4.1.5	The County shall implement a program to promote infill development in existing communities. A. Projects site must be consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations. B. Project sites may not be more than five acres in size and must demonstrate substantially development has occurred on 2 or more sides of the site. C. Project site has no value as habitat for endangered, rare or threatened species. D. Approval of a project would not result in any significant effects relating to traffic, noise, air quality, or water quality. E. The site can be adequately served by all required utilities and public services.
		2.5.2.1	Neighborhood commercial centers shall be oriented to serve the needs of the surrounding area, grouped as a clustered, contiguous center where possible, and should incorporate but not be limited to the following design concepts as further defined in the Zoning Ordinance: A. Maximum first floor building size should be sized to be suitable for the site; B. Allow for Mixed Use Developments; C. No outdoor sales or automotive repair facilities; D. Reduced setback with landscaping and walkways; E. Interior parking, or the use of parking structure; F. Bicycle access with safe and convenient bicycle storage area; G. On-street parking to reduce the amount of on-site parking; H. Community bulletin boards/computer kiosks; I. Outdoor artwork, statues, etc., in prominent places; and J. Pedestrian circulation to adjacent commercial centers.
		2.5.2.2	New commercial development should be located nearby existing commercial facilities to strengthen existing shopping locations and avoid strip commercial.



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OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 11 - TRANSPORTATION IMPACT ASSESSMENT**

**ATTACHMENT A: REVIEW OF POLICIES THAT ARE SUPPORTIVE OF VMT MITIGATION MEASURES**

Plan/Document	Element	Policy	Description
El Dorado County General Plan	Land Use	2.5.2.3	New community shopping centers should also contain the applicable design features of Policy 2.5.2.1.
El Dorado County General Plan	Circulation	TC-1p	The County shall encourage street designs for interior streets within new subdivisions that minimize the intrusion of through traffic on pedestrians and residential uses while providing efficient connections between neighborhoods and communities.
		TC-1v	The County shall consider modification of the circulation diagram to include a frequent transit service operating on exclusive right-of-way to the El Dorado Hills Business Park from residential communities in El Dorado County and from the City of Folsom.
		TC-2b	The County shall promote transit services where population and employment densities are sufficient to support those transit services, particularly within the western portion of the county and along existing transit corridors in the rural areas.
		TC-3c	The County shall encourage new development within Community Regions and Rural Centers to provide appropriate on-site facilities that encourage employees to use alternative transportation modes. The type of facilities may include bicycle parking, shower and locker facilities, and convenient access to transit, depending on the development size and location.
		TC-4a	The County shall implement a system of recreational, commuter, and inter-community bicycle routes in accordance with the County's Bicycle Transportation Plan. The plan should designate bikeways connecting residential areas to retail, entertainment, and employment centers and near major traffic generators such as recreational areas, parks of regional significance, schools, and other major public facilities, and along recreational routes.
		TC-4b	The County shall construct and maintain bikeways in a manner that minimizes conflicts between bicyclists and motorists
		TC-4c	The County shall give priority to bikeways that will serve population centers and destinations of greatest demand and to bikeways that close gaps in the existing bikeway system.
		TC-4d	The County shall develop and maintain a program to construct bikeways, in conjunction with road projects, consistent with the County's Bicycle Transportation Plan, taking into account available funding for construction and maintenance.
		TC-4e	The County shall require that rights-of-way or easements be provided for bikeways or trails designated in adopted master plans, as a condition of land development when necessary to mitigate project impacts

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ATTACHMENT 12 - DKS MEMO FOR TRANSPORTATION IMPACT ASSESSMENT**



428 J STREET, SUITE 340 • SACRAMENTO, CA 95814 • 916.368.2000 • DKSASSOCIATES.COM

## MEMORANDUM NAME

DATE: September 26, 2023

TO: Zach Oates | El Dorado County

FROM: Josh Pilachowski | DKS Associates  
Jim Damkowitch | DKS Associates

SUBJECT: Peer Review of the Transportation Impact Analysis for the Granade Business Park Project Project #21197-014

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This memorandum summarizes the review of the transportation impact analysis prepared by FSI Traffic Engineering. Peer reviews are used to ensure that traffic impact studies are prepared in accordance with the standards of care, best practices, and established conventions and procedures typically used in the traffic engineering profession.

## SCOPE OF REVIEW

DKS Associates has conducted a peer review of the PDF document titled *Traffic Impact Assessment for Granade Business Park*, prepared by FSI Traffic Engineering and dated September 8, 2023. This is the fourth review of this document. The previous versions of this document reviewed were dated April 28, 2023, June 19, 2023, and August 10, 2023. The document was reviewed for content and compliance and has sufficiently addressed all comments.

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 13 - DRAINAGE STUDY WITH SOIL REPORT**

**RECEIVED**

NOV 08 2022

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EL DORADO COUNTY  
PLANNING AND BUILDING DEPARTMENT

**Drainage Study for  
DG Granade Business Properties LLC**

*04-08-2022*



WARREN CONSULTING ENGINEERS, INC.  
1117 WINDFIELD WAY, SUITE 110  
EL DORADO HILLS, CA 95672

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**DR22-0009**

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 13 - DRAINAGE STUDY WITH SOIL REPORT**

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A2	10yr Storm Drain Network Analysis
A3	100yr Storm Drain Network Analysis
A4	Detention Pond Calculations
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<b><u>Exhibit</u></b>	<b><u>Description</u></b>
PRE	Pre-Developed Shed Map
POST	Post-Developed Shed Map

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**ATTACHMENT 13 - DRAINAGE STUDY WITH SOIL REPORT**

### **Existing Parcel Description**

The existing parcel of land in which this proposed development resides is roughly 6.92 acres in total size with the project area being approximately 6.92 acres of the total parcel area. It is located near the intersection of Business Drive and Product Drive, in Shingle Springs. The Parcel is undeveloped and covered with herbaceous (mix of grass, weeds, and brush). Along the west edge of the parcel there exists Shingle Lime Mine Road. All of the existing site runoff sheds toward Shingle Lime Mine Road which eventually reaches Deer Creek southwest of the project site.

### **Proposed Improvements**

The proposed project consists of 8 commercial buildings of approx. 9,020 sf. The building will have surrounding improvements consisting of the typical asphalt paved parking areas, drives isles, a aggregate base vehicle pad and concrete areas. The runoff of the proposed roof of the building, paved parking areas, and the aggregate base pad sheet flow towards or is collected into the proposed drainage system that releases into two vegetive swales that directs the runoff to a proposed detention basin located at the south western corner of the project site. The detention basin releases a controlled flow toward the existing drainage path along Shingle Lime Mine Road.

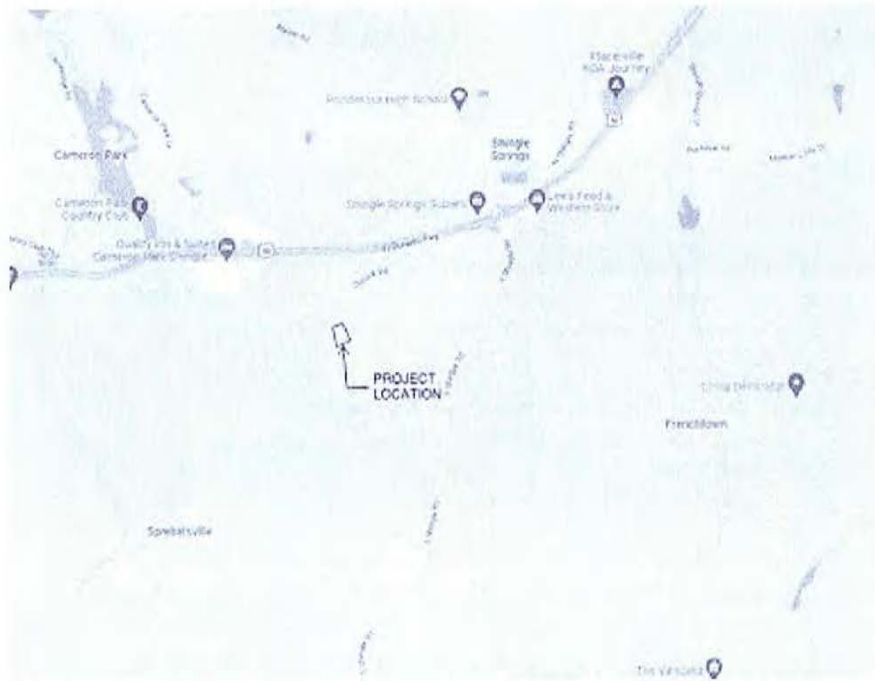
### **Scope of Study**

The purpose of this study is to give evidence through accepted calculation methods that the proposed development has been designed to accept and transmit the anticipated run-off based on the County provided storm water run-off information. The study will also provide data supporting that there will be no increase or an insignificant increase in the drainage run-off from the site in the post-development condition, as compared to the pre-developed state.

In accordance with the County's Post Construction Storm Water Management Program Requirements, and based on the proposed impervious area of this project, this is a Regulated Project subject to Hydromodification Analysis. A storm water storage system has been implemented on this site to mitigate the increased runoff from the proposed impervious surface. This will both promote infiltration and also treatment of storm water runoff.



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**Location Map**

From Google Maps



**Aerial Photo**

From Google Earth

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### **Run-off Calculation Methodology**

The County of El Dorado Drainage Manual has been utilized in development of the proposed drainage system. The El Dorado County Manual utilizes a "Peak Flow" method utilizing the traditional Rational Equation. It uses rainfall data and a calculated time of concentration. Based on this manual we have determined that the site is within the Mean annual Rainfall Zone of 32 (inches) per year. The overland roughness coefficient for the existing site condition a value of 0.24 per Table 2.4.3 of the EDC Manual was selected. This was selected based on the existing condition of the undeveloped parcel which is fairly covered in vegetation and brush. A roughness coefficient for the proposed site condition of 0.011 was selected for the new paved areas and roofs, also from Table 2.4.3, and the unpaved proposed areas will maintain the existing runoff coefficient. For determination of the runoff coefficient, a soil analysis was taken from the USDA soil survey to determine the soil classification. This survey showed class D and is mostly classified as "Rescue Sandy Loam (ReB)". We agree with the classification based on our observation of site conditions.

### **Curve Number Calculations**

Using the soil classes as stated above, we can derive the following Curve Numbers for determining the Runoff Coefficient:

#### **Curve Numbers**

(From Appendix 2.3, SCS Curve Tables, EDC Drainage Manual)

##### **Pre-Developed**

100%→Herbaceous → *Fair* Hydrologic Cond. → Soil Group D → CN=85

0%→Pavement/Roofs → Soil Group C → CN=98

**Total CN = 85**

##### **Post-Developed**

82%→Pavement/Roofs → Soil Group C → CN=98

18%→ Open Space → *Good* Hydrologic Cond. → Soil Group C → CN=74

**Total CN = 94**

### **Run-off Coefficient Calculations**

With these established curve numbers, we can derive the respective runoff coefficient using Figures 2.5.1 and 2.5.2 of the El Dorado County Drainage Manual. The Time of concentration for each of these shed areas has been established in accordance with Section 2.6 of the EDC Drainage Manual. Times of Concentration have been rounded to the nearest value that relates to the Runoff Coefficient charts within the El Dorado County Drainage Manual, and as updated and re-adopted on September 22, 2020.

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### **Run-off Totals**

With the variables established, the Pre-Development and Post Development Runoff totals can be calculated and summarized below:

The cumulative discharges from the site are shown below and also detailed in Exhibits in Appendix A5 within this report.

	2Year/24hr	Storm10 Year Storm	100 Year Storm
Total Site Post-Developed	0.76 cfs	14.75 cfs	20.81 cfs
Total Site Pre-Developed	0.70 cfs (0.06 cfs)	7.32 cfs (7.43cfs)	9.93 cfs (10.88 cfs)

### **Discharge Velocities**

With the existing site being undeveloped there is currently no mitigation to the discharge velocity. The discharge total of the existing shed is calculated to be approximately 7.32 cfs in a 10-year event. The proposed development will result in a site runoff of approximately 14.75 cfs during 10-year event. The increase in site runoff is addressed through proposed mitigation measures of vegetative swales and a detention basin.

### **Drainage Networks**

Within this report, we have provided an analysis of the proposed drainage network within proposed shed areas 1-11. Runoff has been calculated for each inlet structure to determine the appropriate pipe sizes and ensure the hydraulic grade line stays below the proposed grate elevations. Refer to Appendix A2 and A3 for drainage network analysis and hydraulic grade line calculations.

### **Mitigation Measures**

#### **Vegetive Swale**

The project will have 2 vegetive swales constructed to collect and treat the storm water runoff from the paved surfaces. The swales will direct the runoff to the proposed detention basin. The first vegetative swale is located along the north and easterly edges of the property and the second vegetative swale is located along the southern edge of property and collects the runoff from a portion of the building and the impervious aggregate base area. The calculations for the vegetative swales can be found in Appendix A6.

#### **Detention Basin**

The project is also going to implement a detention basin at the southwestern corner of the parcel as a mitigation measure for the post-development of the site. It is intended to capture the added runoff created from proposed added impervious surfaces. The required volume is based on the differences between the proposed and existing 10 year hydrographs. The existing hydraulic volume is calculated to be 44,997 cuft and the proposed volume 76,378 cuft following site development. The required storage volume is 17,512 cuft based on these values. The proposed detention basin will hold approximately



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18,301 cuft, which is oversized for the possibility of future development. The hydrograph and the pond sizing calculation are in appendix A4.

#### **Drainage System Maintenance**

In order to ensure the ongoing performance of the retention basin, the owner will be charged with the following maintenance responsibilities related to the vegetive swales and drainage network. The maintenance instructions for the both

It is the owner's responsibility to perform the following:

##### Drainage Network

1. Remove significant deposits of debris and silt from Inlets and flush pipes as needed.
  - a. Inspect frequency: once every 2 years.

##### Vegetated Swale

1. Remove significant deposits of debris and silt from base of the swale.
  - a. Inspect frequency: Prior to any major storm event
2. Repair/replace vegetation as necessary to maintain full cover and prevent erosion.
  - b. Inspect frequency: Prior to and after any major storm event.

##### Detention Basin

1. Remove significant deposits of debris and silt from base of the basin.
  - a. Inspect frequency: Prior to any major storm event
2. Remove debris/sediment build-up at pipe discharge.
  - c. Inspect frequency: Prior to and after any major storm event.

#### **Hydromodification**

The project is going to implement a detention basin at the southwestern corner of the parcel as a mitigation measures for the post-development of the site. It is intended to capture the added runoff created from proposed added impervious surfaces. The proposed detention basin has a storage volume of 18,301 cuft, which is oversized for the possibility of future development. The hydrograph and the pond sizing calculations can be found in Appendix A4.

#### **Stormwater Run-on**

The proposed project does not foresee having any stormwater run-on from neighboring properties.

#### **Overall Conclusions**

Based on these findings, the project design successfully mitigates the affects this project could potentially have on the existing downstream drainage networks.

## **Appendix A1**

USGS Soil Survey Info

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United States  
Department of  
Agriculture

**NRCS**

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

**Custom Soil Resource  
Report for  
El Dorado Area,  
California**

**usgs**



April 6, 2022

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## **Preface**

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Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

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## **How Soil Surveys Are Made**

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Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units).

Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

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Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and



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identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

## **Soil Map**

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The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

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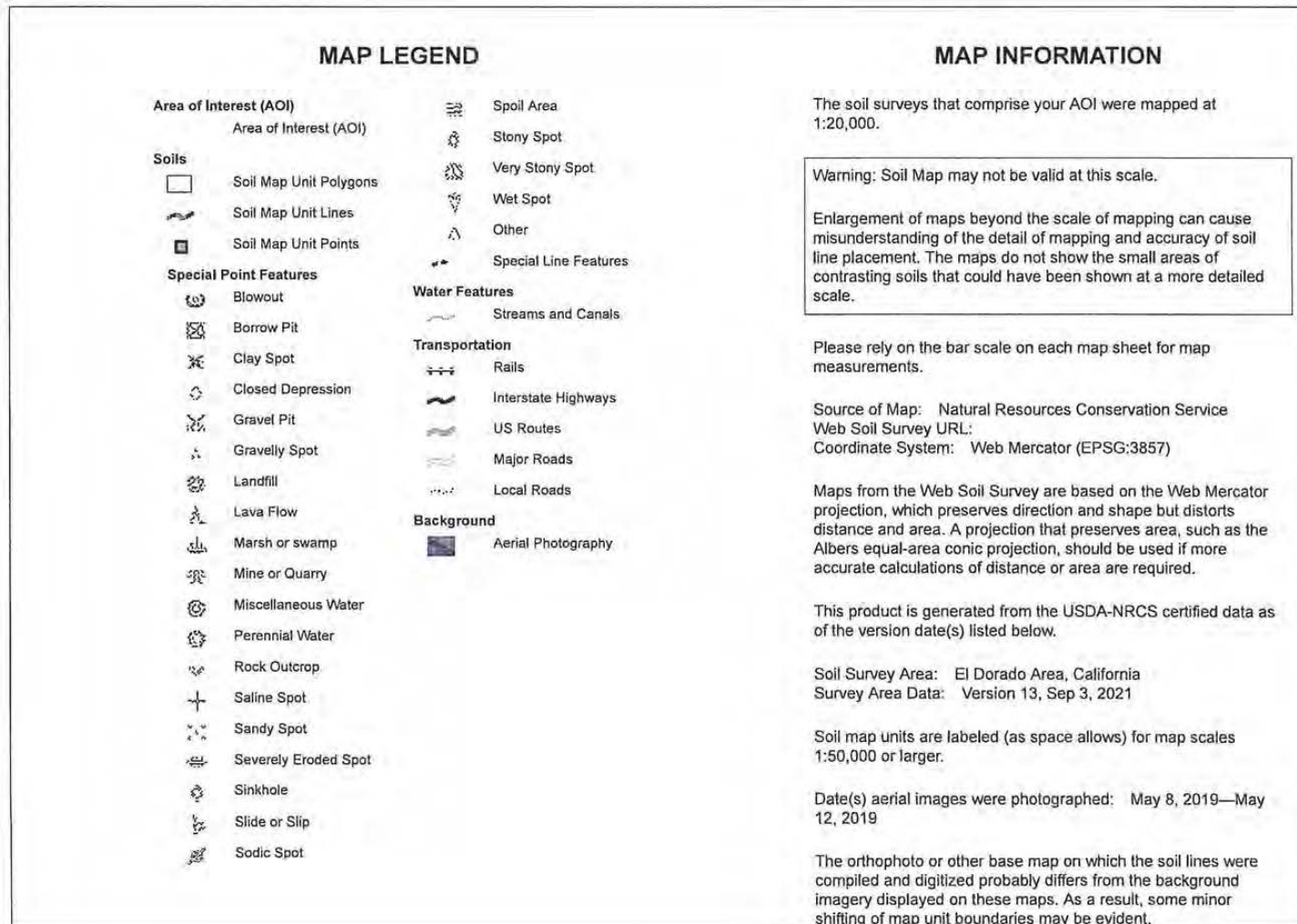


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## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
ReB	Rescue sandy loam, 2 to 9 percent slopes	9.5	95.9%
Rk	Rescue clay, clayey variant	0.4	4.1%
Totals for Area of Interest		10.0	100.0%

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

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onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

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**El Dorado Area, California**

**ReB—Rescue sandy loam, 2 to 9 percent slopes**

**Map Unit Setting**

*National map unit symbol:* hj0x  
*Elevation:* 800 to 2,000 feet  
*Mean annual precipitation:* 30 inches  
*Mean annual air temperature:* 59 degrees F  
*Frost-free period:* 200 to 270 days  
*Farmland classification:* Prime farmland if irrigated

**Map Unit Composition**

*Rescue and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Rescue**

**Setting**

*Landform:* Ridges  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope, interfluvium  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Parent material:* Residuum weathered from granodiorite

**Typical profile**

*H1 - 0 to 14 inches:* sandy loam  
*H2 - 14 to 26 inches:* sandy clay loam  
*H3 - 26 to 34 inches:* sandy loam  
*H4 - 34 to 55 inches:* coarse sandy loam  
*H5 - 55 to 66 inches:* loamy coarse sand  
*H6 - 66 to 70 inches:* weathered bedrock

**Properties and qualities**

*Slope:* 2 to 9 percent  
*Depth to restrictive feature:* 66 to 70 inches to paralithic bedrock  
*Drainage class:* Well drained  
*Runoff class:* Medium  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Moderate (about 7.2 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 3e  
*Land capability classification (nonirrigated):* 3e  
*Hydrologic Soil Group:* C  
*Ecological site:* F018X1202CA - Deep Thermic Steep Hillslopes 28-35 PZ  
*Hydric soil rating:* No

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**Minor Components**

**Argonaut**

*Percent of map unit: 8 percent*  
*Landform: Ridges*  
*Landform position (two-dimensional): Shoulder*  
*Landform position (three-dimensional): Interfluvium*  
*Down-slope shape: Linear*  
*Across-slope shape: Linear*  
*Hydric soil rating: No*

**Rescue**

*Percent of map unit: 7 percent*  
*Hydric soil rating: No*

**Rk—Rescue clay, clayey variant**

**Map Unit Setting**

*National map unit symbol: hj14*  
*Elevation: 500 to 1,500 feet*  
*Mean annual precipitation: 30 inches*  
*Mean annual air temperature: 59 degrees F*  
*Frost-free period: 200 days*  
*Farmland classification: Farmland of statewide importance*

**Map Unit Composition**

*Rescue variant and similar soils: 85 percent*  
*Minor components: 15 percent*  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Rescue Variant**

**Setting**

*Landform: Drainageways*  
*Landform position (two-dimensional): Toeslope*  
*Landform position (three-dimensional): Talus*  
*Down-slope shape: Linear*  
*Across-slope shape: Linear*  
*Parent material: Alluvium derived from mixed sources over igneous rock*

**Typical profile**

*H1 - 0 to 23 inches: clay*  
*H2 - 23 to 36 inches: clay*  
*H3 - 36 to 48 inches: clay loam*  
*H4 - 48 to 52 inches: weathered bedrock*

**Properties and qualities**

*Slope: 0 to 2 percent*  
*Depth to restrictive feature: 48 to 52 inches to paralithic bedrock*  
*Drainage class: Poorly drained*



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*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)  
*Depth to water table:* About 0 inches  
*Frequency of flooding:* Rare  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Moderate (about 7.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 3w  
*Land capability classification (nonirrigated):* 3w  
*Hydrologic Soil Group:* C/D  
*Ecological site:* R018X111CA - Low Gradient, Concave Depressions  
*Hydric soil rating:* Yes

**Minor Components**

**Unnamed**

*Percent of map unit:* 10 percent  
*Landform:* Fan remnants  
*Hydric soil rating:* Yes

**Rescue**

*Percent of map unit:* 2 percent  
*Hydric soil rating:* No

**Unnamed**

*Percent of map unit:* 1 percent  
*Landform:* Drainageways  
*Hydric soil rating:* Yes

**Auburn**

*Percent of map unit:* 1 percent  
*Landform:* Hills  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Concave  
*Across-slope shape:* Convex  
*Hydric soil rating:* No

**Delpiedra**

*Percent of map unit:* 1 percent  
*Hydric soil rating:* No

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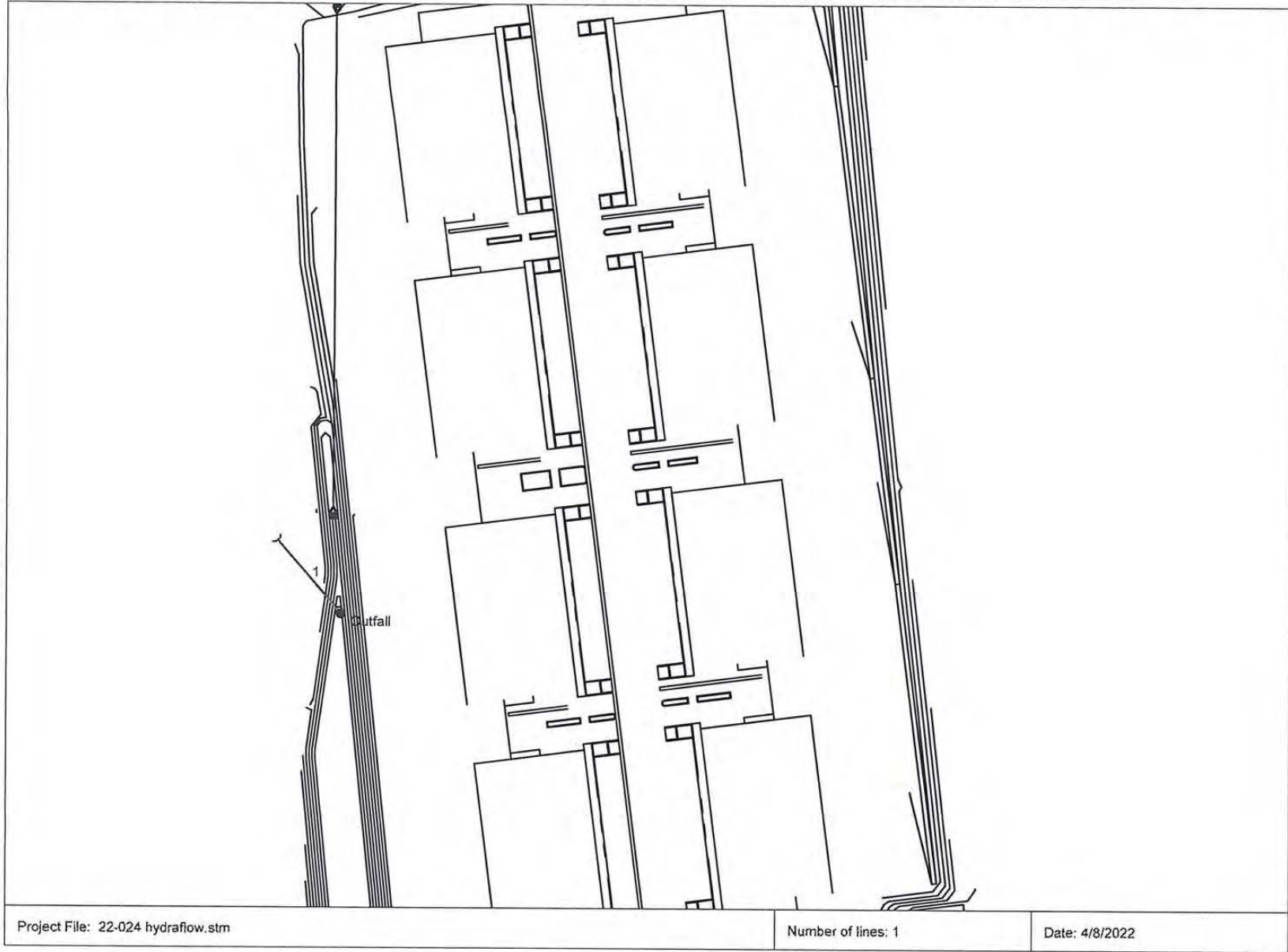
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## **Appendix A2**

### 10yr Storm Drain Network Analysis

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Hydraflow Storm Sewers Extension for Autodesk® AutoCAD® Civil 3D® Plan



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## Structure Report

Page 1

Struct No.	Structure ID	Junction Type	Rim Elev (ft)	Structure			Line Out			Line In		
				Shape	Length (ft)	Width (ft)	Size (in)	Shape	Invert (ft)	Size (in)	Shape	Invert (ft)
1		OpenHeadwall	1324.50	n/a	n/a	n/a	18	Cir	1322.00			
Project File: 22-024 hydraflow.stm							Number of Structures: 1			Run Date: 4/8/2022		

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**FL-DOT Report**

Page 1

Line No	To Line	Type of struc	n - Value	Len	Drainage Area			Time of conc	Time of Flow in sect	Inten (I)	Total CA	Add Q	Inlet elev	Elev of HGL			Rise	HGL	ADD		Date: 4/8/2022		
					C1 = 0.2 C2 = 0.5 C3 = 0.9	Incre-ment (ac)	Sub-Total (ac)							Sum CA	Elev of Crown				Span	Pipe	Full Flow	Frequency: 10 yrs	
															Elev of Invert							Proj: 22-024 hydraflow.stm	
															Up	Down	Fall	Size	Slope	Vel	Cap	Line description	
(ft)	(ft)	(ft)	(in)	(%)	(ft/s)	(cfs)																	
1	End	Hdwl	0.013	65.000	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	20.00	0.16	2.13	3.72	4.13 12.05	1324.50	1323.47 1323.50 1322.00	1322.62 1322.80 1321.30	0.86 18 0.70 Cir	18 1.08	7.09 6.17	12.05 10.90				
NOTES: Intensity = 16.58 / (Inlet time + 2.00) ^ 0.66 (in/hr) ; Time of flow in section is based on full flow.																							
Project File: 22-024 hydraflow.stm																							



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**MyReport**

Page 1

Line No.	Area Dn	Area Up	Byp Ln No	Coeff C1	Coeff C2	Coeff C3	Capac Full	Crit Depth	Cross SI, Sw	Cross SI, Sx	Curb Len	Defl Ang	Depth Dn	Depth Up	DnStm Ln No	Drng Area	Easting X	EGL Dn	EGL Up	Energy Loss
	(sqft)	(sqft)		(C)	(C)	(C)	(cfs)	(ft)	(ft/ft)	(ft/ft)	(ft)	(Deg)	(ft)	(ft)		(ac)	(ft)	(ft)	(ft)	(ft)
1	1.64	1.76	n/a	0.20	0.50	0.90	10.90	1.32	....	....	....	-130.364	1.32	1.47	Outfall	6.20	4300.42	1323.45	1324.20	0.772
Project File: 22-024 hydraflow.stm													Number of lines: 1			Date: 4/8/2022				
NOTES: ** Critical depth																				

Storm Sewers

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Myport

Page 2

Flow Rate	Sf Ave	Sf Dn	Grate Area	Grate Len	Grate Width	Gnd/Rim El Dn	Gnd/Rim El Up	Gutter Depth	Gutter Slope	Gutter Spread	Gutter Width	HGL Dn	HGL Up	HGL Jnct	HGL Jmp Dn	HGL Jmp Up	Incr CxA	Incr Q	Inlet Depth	Inlet Eff
(cfs)	(ft/ft)	(ft/ft)	(sqft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)		(cfs)	(ft)	(%)
12.05	1.188	1.189	....	....	....	1321.30	1324.50	....	....	....	....	1322.62	1323.47	1324.20	....	....	3.72	12.05	....	100
Project File: 22-024 hydraflow.stm												Number of lines: 1				Date: 4/8/2022				
NOTES: ** Critical depth																				

Storm Sewers

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Page 3

Inlet ID	Inlet Loc	(ft)	Inlet Time (min)	i Sys (in/hr)	i Inlet (in/hr)	Invert Dn (ft)	Invert Up (ft)	Jump Loc (ft)	Jump Len (ft)	Vel Hd Jmp Dn (ft)	Vel Hd Jmp Up (ft)	J-Loss Coeff	Junct Type	Known Q (cfs)	Cost RCP	Cost CMP	Cost PVC	Line ID	
	Sag		20.0	2.13	2.13	1321.30	1322.00	....	....	0.00	0.00	1.00	Hdwall	4.13	2,080	1,872	1,768		
<div> <div>Project File: 22-024 hydraflow.stm</div> <div>Number of lines: 1</div> <div>Date: 4/8/2022</div> </div> <div>           NOTES: Intensity = 16.58 / (Inlet time + 2.00) ^ 0.66 -- Return period = 10 Yrs. ; ** Critical depth         </div>																			

Storm Sewers

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My report

Page 4

Line Length	Line Size	Line Slope	Line Type	Local Depr	n-val Gutter	n-val Pipe	Minor Loss	Northing Y	Pipe Travel	Q Byp	Q Capt	Q Carry	Line Rise	Runoff Coeff	Line Span	Area A1	Area A2	Area A3	Tc	Throat Ht	Total Area	Total CxA
(ft)	(in)	(%)		(in)			(ft)	(ft)	(min)	(cfs)	(cfs)	(cfs)	(in)	(C)	(in)	(ac)	(ac)	(ac)	(min)	(in)	(ac)	
65.000	18	1.08	Cir	....	....	0.013	0.73	6029.67	0.16	0.00	12.05	0.00	18	0.60	18	0.00	0.00	0.00	20.0	....	6.20	3.72
Project File: 22-024 hydraflow.stm													Number of lines: 1				Date: 4/8/2022					
NOTES: ** Critical depth																						

Storm Sewers



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## Hydraulic Grade Line Computations

Page 1

Line  (1)	Size  (in) (2)	Q  (cfs) (3)	Downstream								Len  (ft) (12)	Upstream								Check		JL coeff (K) (23)	Minor loss (ft) (24)
			Invert elev (ft) (4)	HGL elev (ft) (5)	Depth (ft) (6)	Area (sqft) (7)	Vel (ft/s) (8)	Vel head (ft) (9)	EGL elev (ft) (10)	Sf (%) (11)		Invert elev (ft) (13)	HGL elev (ft) (14)	Depth (ft) (15)	Area (sqft) (16)	Vel (ft/s) (17)	Vel head (ft) (18)	EGL elev (ft) (19)	Sf (%) (20)	Ave Sf (%) (21)	Enrgy loss (ft) (22)		
1	18	12.05	1321.30	1322.62	1.32	1.64	7.34	0.84	1323.45	1.189	65.000	1322.00	1323.47	1.47	1.76	6.84	0.73	1324.20	1.187	1.188	0.772	1.00	0.73
Project File: 22-024 hydraflow.stm														Number of lines: 1					Run Date: 4/8/2022				
; c = cir e = ellip b = box																							

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## Hydraflow HGL Computation Procedure

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Page 1

### General Procedure:

Hydraflow computes the HGL using the Bernoulli energy equation. Manning's equation is used to determine energy losses due to pipe friction. In a standard step, iterative procedure, Hydraflow assumes upstream HGLs until the energy equation balances. If the energy equation cannot balance, supercritical flow exists and critical depth is temporarily assumed at the upstream end. A supercritical flow Profile is then computed using the same procedure in a downstream direction using momentum principles.

- Col. 1 The line number being computed. Calculations begin at Line 1 and proceed upstream.
- Col. 2 The line size. In the case of non-circular pipes, the line rise is printed above the span.
- Col. 3 Total flow rate in the line.
- Col. 4 The elevation of the downstream invert.
- Col. 5 Elevation of the hydraulic grade line at the downstream end. This is computed as the upstream HGL + Minor loss of this line's downstream line.
- Col. 6 The downstream depth of flow inside the pipe (HGL - Invert elevation) but not greater than the line size.
- Col. 7 Cross-sectional area of the flow at the downstream end.
- Col. 8 The velocity of the flow at the downstream end, (Col. 3 / Col. 7).
- Col. 9 Velocity head (Velocity squared / 2g).
- Col. 10 The elevation of the energy grade line at the downstream end, HGL + Velocity head, (Col. 5 + Col. 9)
- Col. 11 The friction slope at the downstream end (the S or Slope term in Manning's equation).
- Col. 12 The line length.
- Col. 13 The elevation of the upstream invert.
- Col. 14 Elevation of the hydraulic grade line at the upstream end.
- Col. 15 The upstream depth of flow inside the pipe (HGL - Invert elevation) but not greater than the line size.
- Col. 16 Cross-sectional area of the flow at the upstream end.
- Col. 17 The velocity of the flow at the upstream end, (Col. 3 / Col. 16).
- Col. 18 Velocity head (Velocity squared / 2g).
- Col. 19 The elevation of the energy grade line at the upstream end, HGL + Velocity head, (Col. 14 + Col. 18)
- Col. 20 The friction slope at the upstream end (the S or Slope term in Manning's equation).
- Col. 21 The average of the downstream and upstream friction slopes.
- Col. 22 Energy loss. Average  $Sf/100 \times \text{Line Length}$  (Col. 21/100 x Col. 12). Equals (EGL upstream - EGL downstream) +/- tolerance.
- Col. 23 The junction loss coefficient (K).
- Col. 24 Minor loss. (Col. 23 x Col. 18). Is added to upstream HGL and used as the starting HGL for the next upstream line(s).

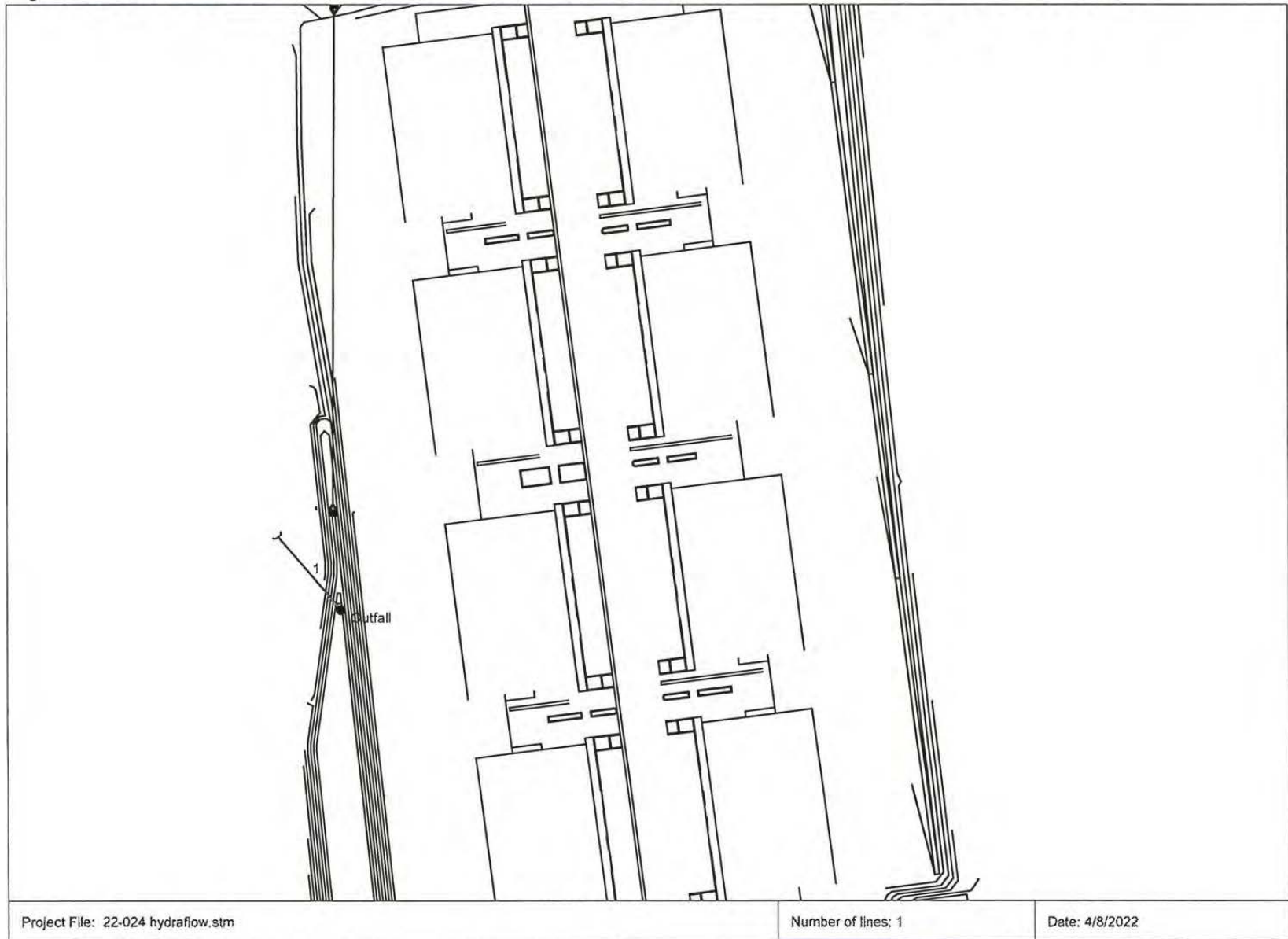


## **Appendix A3**

### 100yr Storm Drain Network Analysis

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 13 - DRAINAGE STUDY WITH SOIL REPORT**

**Hydraflow Storm Sewers Extension for Autodesk® AutoCAD® Civil 3D® Plan**



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
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ATTACHMENT 13 - DRAINAGE STUDY WITH SOIL REPORT**

## Structure Report

Page 1

Struct No.	Structure ID	Junction Type	Rim Elev (ft)	Structure			Line Out			Line In		
				Shape	Length (ft)	Width (ft)	Size (in)	Shape	Invert (ft)	Size (in)	Shape	Invert (ft)
1		OpenHeadwall	1324.50	n/a	n/a	n/a	18	Cir	1322.00			
Project File: 22-024 hydraflow.stm							Number of Structures: 1			Run Date: 4/8/2022		

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 13 - DRAINAGE STUDY WITH SOIL REPORT**

**FL-DOT Report**

Page 1

Line No	To Line	Type of struc	n - Value	Len	Drainage Area			Time of conc	Time of Flow in sect	Inten (l)	Total CA	Add Q	Inlet elev	Elev of HGL			Rise	HGL	ADD		Date: 4/8/2022
					C1 = 0.2 C2 = 0.5 C3 = 0.9	Incre-ment (ac)	Sub-Total (ac)							Sum CA	Span	Pipe	Full Flow	Frequency: 100 yrs			
																		Proj: 22-024 hydraflow.stm			
																		Q	Up	Down	Fall
(cfs)	(ft)	(ft)	(ft)	(in)	(%)	(ft/s)	(cfs)														
1	End	Hdwl	0.013	65.000	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	20.00	0.18	1.71	3.72	4.13 10.51	1324.50	1323.25 1323.50 1322.00	1322.62 1322.80 1321.30	0.62  0.70	18 18 Cir	0.96 1.08	6.54 6.17	10.51 10.90	
NOTES: Intensity = 7.71 / (Inlet time + 0.10) ^ 0.50 (in/hr) ; Time of flow in section is based on full flow.																					
Project File: 22-024 hydraflow.stm																					

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
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ATTACHMENT 13 - DRAINAGE STUDY WITH SOIL REPORT**

Myport

Page 1

Line No.	Area Dn	Area Up	Byp Ln No	Coeff C1	Coeff C2	Coeff C3	Capac Full	Crit Depth	Cross SI, Sw	Cross SI, Sx	Curb Len	Defl Ang	Depth Dn	Depth Up	DnStm Ln No	Drng Area	Easting X	EGL Dn	EGL Up	Energy Loss
	(sqft)	(sqft)		(C)	(C)	(C)	(cfs)	(ft)	(ft/ft)	(ft/ft)	(ft)	(Deg)	(ft)	(ft)		(ac)	(ft)	(ft)	(ft)	(ft)
1	1.57	1.57	n/a	0.20	0.50	0.90	10.90	1.24	....	....	....	-130.364	1.32	1.24**	Outfall	6.20	4300.42	1323.32	1323.94	0.000
Project File: 22-024 hydraflow.stm													Number of lines: 1			Date: 4/8/2022				
NOTES: ** Critical depth																				

Storm Sewers

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
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ATTACHMENT 13 - DRAINAGE STUDY WITH SOIL REPORT**

**MyReport**

Page 2

Flow Rate	Sf Ave	Sf Dn	Grate Area	Grate Len	Grate Width	Gnd/Rim El Dn	Gnd/Rim El Up	Gutter Depth	Gutter Slope	Gutter Spread	Gutter Width	HGL Dn	HGL Up	HGL Jnct	HGL Jmp Dn	HGL Jmp Up	Incr CxA	Incr Q	Inlet Depth	Inlet Eff
(cfs)	(ft/ft)	(ft/ft)	(sqft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)		(cfs)	(ft)	(%)
10.51	0.000	0.000	.....	.....	.....	1321.30	1324.50	.....	.....	.....	.....	1322.62	1323.25 j	1323.25	1322.69	1322.70	3.72	10.51	.....	100
Project File: 22-024 hydraflow.stm													Number of lines: 1				Date: 4/8/2022			
NOTES: ** Critical depth																				

Storm Sewers

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 13 - DRAINAGE STUDY WITH SOIL REPORT**

MyK port

Page 3

Inlet ID	Inlet Loc		Inlet Time	i Sys	i Inlet	Invert Dn	Invert Up	Jump Loc	Jump Len	Vel Hd Jmp Dn	Vel Hd Jmp Up	J-Loss Coeff	Junct Type	Known Q	Cost RCP	Cost CMP	Cost PVC	Line ID	
		(ft)	(min)	(in/hr)	(in/hr)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)			(cfs)					
	Sag		20.0	1.71	1.71	1321.30	1322.00	13.00	6.24	0.70	0.76	1.00 z	Hdwall	4.13	2,080	1,872	1,768		
Project File: 22-024 hydraflow.stm													Number of lines: 1			Date: 4/8/2022			
NOTES: Intensity = 7.71 / (inlet time + 0.10) ^ 0.50 -- Return period = 100 Yrs. ; ** Critical depth																			

Storm Sewers



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
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ATTACHMENT 13 - DRAINAGE STUDY WITH SOIL REPORT**

**MyReport**

Page 4

Line Length	Line Size	Line Slope	Line Type	Local Depr	n-val Gutter	n-val Pipe	Minor Loss	Northing Y	Pipe Travel	Q Byp	Q Capt	Q Carry	Line Rise	Runoff Coeff	Line Span	Area A1	Area A2	Area A3	Tc	Throat Ht	Total Area	Total CxA
(ft)	(in)	(%)		(in)			(ft)	(ft)	(min)	(cfs)	(cfs)	(cfs)	(in)	(C)	(in)	(ac)	(ac)	(ac)	(min)	(in)	(ac)	
65.000	18	1.08	Cir	.....	.....	0.013	n/a	6029.67	0.18	0.00	10.51	0.00	18	0.60	18	0.00	0.00	0.00	20.0	.....	6.20	3.72
Project File: 22-024 hydraflow.stm													Number of lines: 1				Date: 4/8/2022					
NOTES: ** Critical depth																						

Storm Sewers

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 13 - DRAINAGE STUDY WITH SOIL REPORT**

**MyKport**

Page 5

Total Runoff	Vel Ave	Vel Dn	Vel Hd Dn	Vel Hd Up	Vel Up	Cover Dn	Cover Up	Storage		
(cfs)	(ft/s)	(ft/s)	(ft)	(ft)	(ft/s)	(ft)	(ft)	(cft)		
6.38	6.54	6.38	0.70	0.70	6.70	-1.50	1.00	104.53		

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
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ATTACHMENT 13 - DRAINAGE STUDY WITH SOIL REPORT**

## Hydraulic Grade Line Computations

Page 1

Line (1)	Size (in) (2)	Q (cfs) (3)	Downstream								Len (ft) (12)	Upstream								Check		JL coeff (K) (23)	Minor loss (ft) (24)
			Invert elev (ft) (4)	HGL elev (ft) (5)	Depth (ft) (6)	Area (sqft) (7)	Vel (ft/s) (8)	Vel head (ft) (9)	EGL elev (ft) (10)	Sf (%) (11)		Invert elev (ft) (13)	HGL elev (ft) (14)	Depth (ft) (15)	Area (sqft) (16)	Vel (ft/s) (17)	Vel head (ft) (18)	EGL elev (ft) (19)	Sf (%) (20)	Ave Sf (%) (21)	Enrgy loss (ft) (22)		
1	18	10.51	1321.30	1322.62	1.32	1.57	6.38	0.70	1323.32	0.000	65.000	1322.00	1323.25 j	1.24**	1.57	6.70	0.70	1323.94	0.000	0.000	n/a	1.00	0.70
Project File: 22-024 hydraflow.stm														Number of lines: 1					Run Date: 4/8/2022				
Notes: ; ** Critical depth.; j-Line contains hyd. jump ; c = cir e = ellip b = box																							

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
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ATTACHMENT 13 - DRAINAGE STUDY WITH SOIL REPORT**

## Hydraflow HGL Computation Procedure

Page 1

### General Procedure:

Hydraflow computes the HGL using the Bernoulli energy equation. Manning's equation is used to determine energy losses due to pipe friction. In a standard step, iterative procedure, Hydraflow assumes upstream HGLs until the energy equation balances. If the energy equation cannot balance, supercritical flow exists and critical depth is temporarily assumed at the upstream end. A supercritical flow Profile is then computed using the same procedure in a downstream direction using momentum principles.

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## **Appendix A4**

### Detention Pond Calculations



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
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ATTACHMENT 13 - DRAINAGE STUDY WITH SOIL REPORT**

2

## Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v2018.3

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	1.760	2	630	22,510	----	----	----	Pre-Construction
2	SCS Runoff	7.837	2	604	47,438	----	----	----	Post-Construction
3	Reservoir	3.047	2	622	46,942	2	1323.56	10,521	Post
22-024 - Hydrograph - New - 2-23-22.gpw					Return Period: 2 Year			Thursday, 04 / 7 / 2022	



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ATTACHMENT 13 - DRAINAGE STUDY WITH SOIL REPORT**

3

## Hydrograph Report

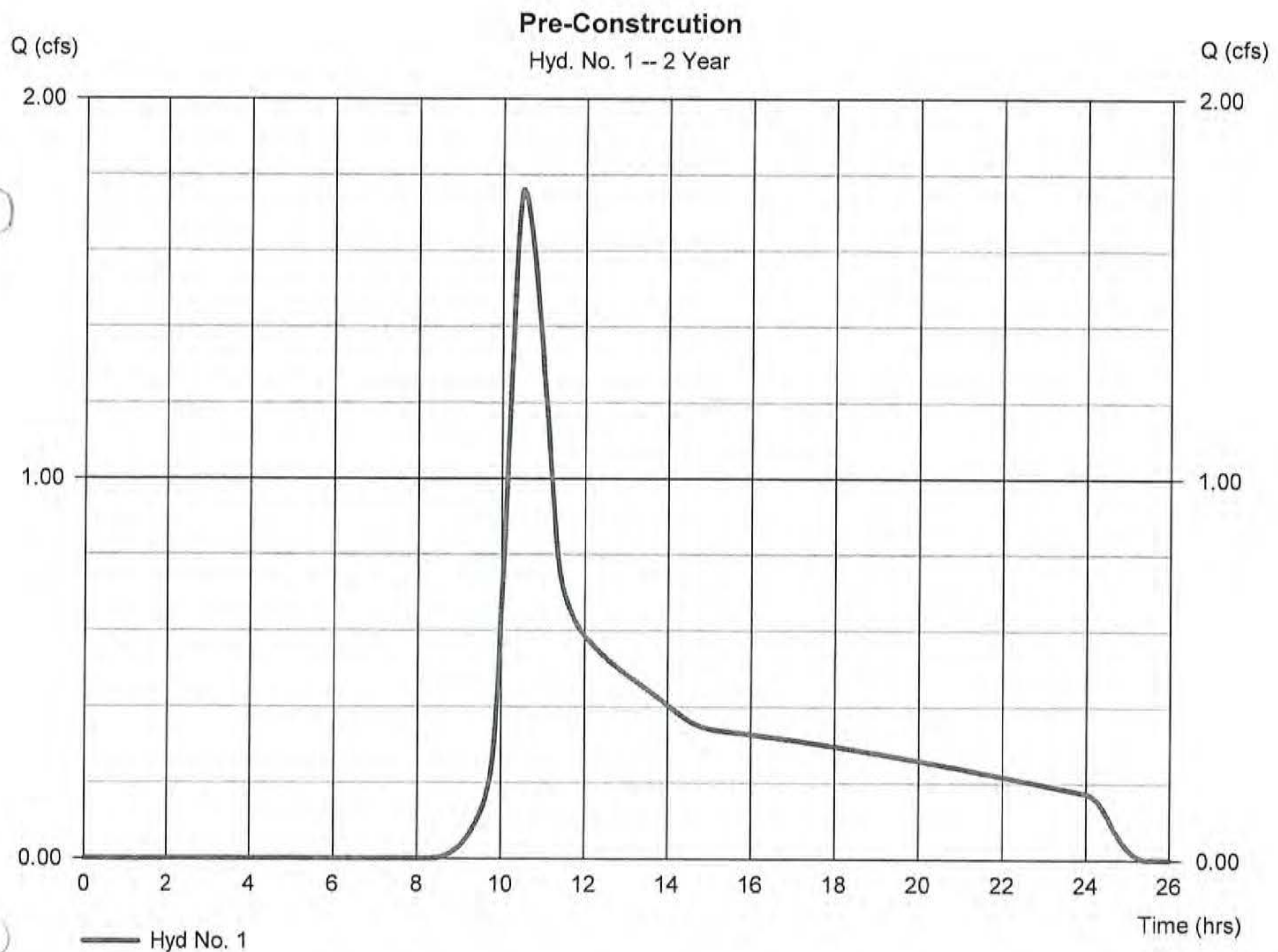
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v2018.3

Thursday, 04 / 7 / 2022

### Hyd. No. 1

#### Pre-Constrcution

Hydrograph type	= SCS Runoff	Peak discharge	= 1.760 cfs
Storm frequency	= 2 yrs	Time to peak	= 10.50 hrs
Time interval	= 2 min	Hyd. volume	= 22,510 cuft
Drainage area	= 6.920 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 55.00 min
Total precip.	= 2.52 in	Distribution	= Type I
Storm duration	= 24 hrs	Shape factor	= 484



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ATTACHMENT 13 - DRAINAGE STUDY WITH SOIL REPORT**

4

## Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v2018.3

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	3.939	2	628	44,997	-----	-----	-----	Pre-Construction
2	SCS Runoff	12.50	2	604	76,378	-----	-----	-----	Post-Construction
3	Reservoir	4.044	2	624	75,709	2	1324.41	17,512	Post
22-024 - Hydrograph - New - 2-23-22.gpw					Return Period: 10 Year			Thursday, 04 / 7 / 2022	

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ATTACHMENT 13 - DRAINAGE STUDY WITH SOIL REPORT**

5

## Hydrograph Report

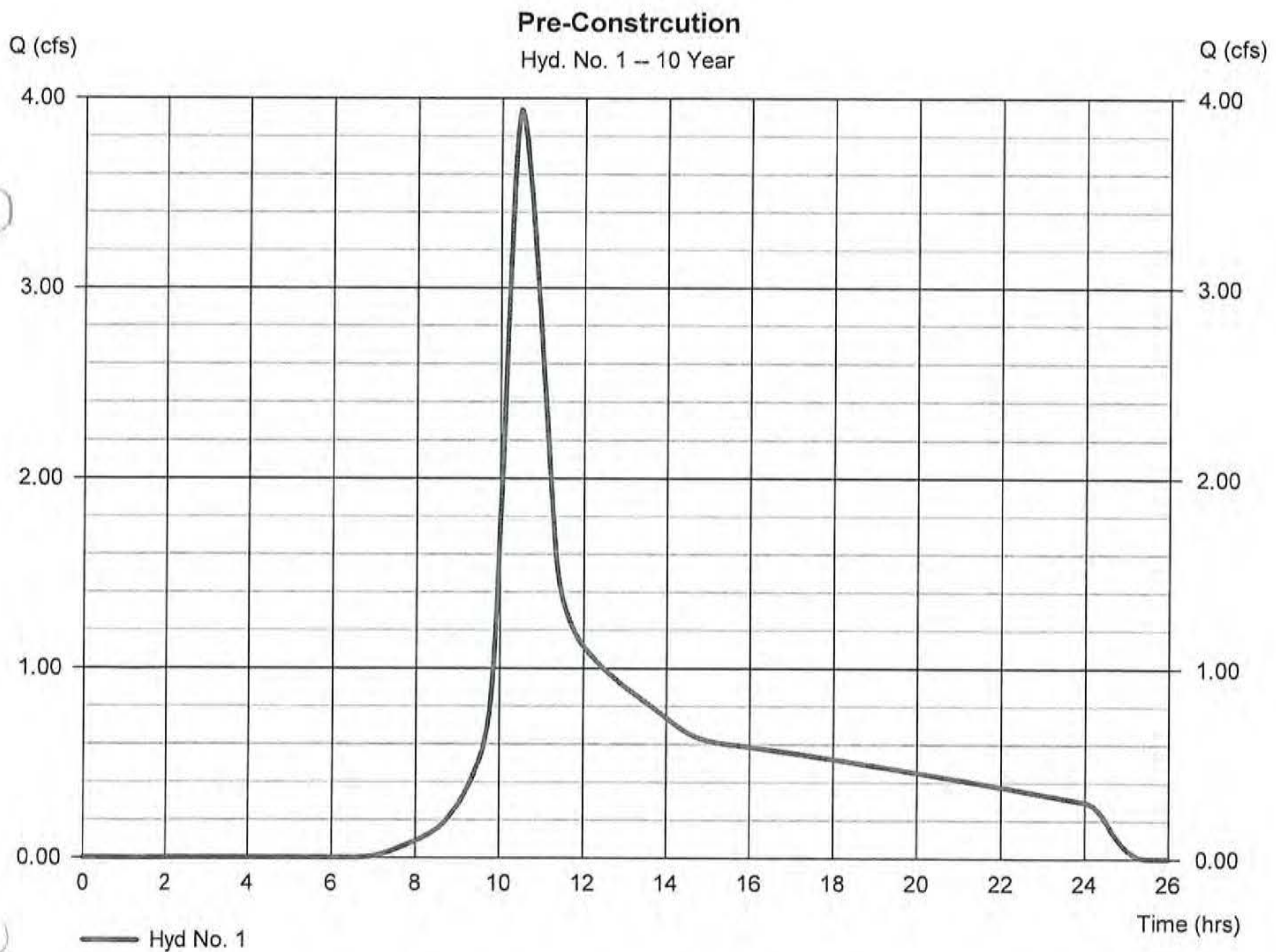
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v2018.3

Thursday, 04 / 7 / 2022

### Hyd. No. 1

#### Pre-Constrction

Hydrograph type	= SCS Runoff	Peak discharge	= 3.939 cfs
Storm frequency	= 10 yrs	Time to peak	= 10.47 hrs
Time interval	= 2 min	Hyd. volume	= 44,997 cuft
Drainage area	= 6.920 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 55.00 min
Total precip.	= 3.71 in	Distribution	= Type I
Storm duration	= 24 hrs	Shape factor	= 484



## 6

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v2018.3

Thursday, 04 / 7 / 2022

File name: EL Dorado Hills - 32.IDF

Tc = time in minutes. Values may exceed 60.

Precip. file name: Sample.pcp

[illegible]

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 13 - DRAINAGE STUDY WITH SOIL REPORT**

## Hydraflow Table of Contents

22-024 - Hydrograph - New - 2-23-22.gpw

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v2018.3

Thursday, 04 / 7 / 2022

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## **Appendix A5**

Project Shed Storm Water Runoff Calc.



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 13 - DRAINAGE STUDY WITH SOIL REPORT**



JOB NAME	Granada Business Property
FILE NAME	22-024 - Storm Water Runoff
JOB #	22-024
USED BY	GV
DATE	February 3, 2022

**Storm Water Runoff - Pre Construction**

Curve Number

Soil Type = D

Total Project Area

A= 301,347 sqft

Impervious Area (CN=98)

A<sub>i</sub>= 0 sqft

Pervious Area (CN=85)

A<sub>p</sub>= 301,347 sqft

$$CN = \frac{(CN * A_i) + (CN * A_p)}{A}$$

CN= 85

**Time of Concentration**

**Sheet Flow**

$$T_t = \frac{0.007(nL)^{0.8}}{(P_2)^{0.5} * S^{0.4}} * (60)$$

T<sub>t</sub> = 53.94 min

n = 0.24  
S = 0.0084  
P<sub>2</sub> = 2.6 in  
L = 300 ft

**Unpaved Concentration Flow**

$$V = 16.1345 \sqrt{S_0}$$

$$T_{up} = V * L$$

V= 4.11 ft/sec  
T<sub>p</sub>= 1.20 min

S<sub>0</sub> = 0.065  
L = 297 ft

**Paved Concentration Flow**

$$V = 20.3283 \sqrt{S_0}$$

$$T_p = L/V$$

V= 0.00 ft/sec  
T<sub>p</sub>= 0.00 min

S<sub>0</sub> = 0  
L = 0 ft

**Total Time of Concentration**

$$\sum T = T_t + T_{up} + T_p$$

T= 55.14 min



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ATTACHMENT 13 - DRAINAGE STUDY WITH SOIL REPORT**

**Runoff Coefficient**

Based on Runoff Coefficient Graph from El Dorado Hills - Drainage Manual

$$C = 0.92$$

**Rainfall Intensity**

Based on Rainfall Intensity Table from El Dorado Hills- Drainage Manual

10yr I =	1.15	in/hr
100yr I =	1.56	in/hr
2yr/24hr =	0.11	in/hr

**Total Runoff**

$Q = CiA$	$Q = CiA$
-----------	-----------

10yr Q =	7.32	cfs
100yr Q =	9.93	cfs
2yr/24hr Q =	0.70	cfs

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 13 - DRAINAGE STUDY WITH SOIL REPORT**



JOB NAME	Granada Business Property
FILE NAME	22-024 - Storm Water Runoff
JOB #	22-024
USED BY	GV
DATE	March 2, 2021

**Storm Water Runoff - Post Construction - DMA 1**

**Curve Number**

Soil Type = D

Total Project Area

A= 89,705 sqft

Impervious Area (CN=98)

Ai= 63,452 sqft

Pervious Area (CN=80)

Ap= 26,253 sqft

$$CN = \frac{(CN * Ai) + (CN * Ap)}{A}$$

CN= 93

**Time of Concentration**

**Sheet Flow**

$$T_t = \frac{0.007(nL)^{0.8}}{(P_2)^{0.5}S^{0.4}} * (60)$$

Tt = 2.17 min

n = 0.011  
S0 = 0.0325  
P2 = 2.6 in  
L = 232 ft

**Unpaved Concentration Flow**

$$V = 16.1345\sqrt{S_0}$$

$$T_{up} = V * L$$

V= 2.55 ft/sec  
Tup= 1.31 min

S0 = 0.025  
L = 200 ft

**Paved Concentration Flow**

$$V = 20.3283\sqrt{S_0}$$

$$T_p = L/V$$

V= 1.57 ft/sec  
Tp= 0.00 min

S0 = 0.006  
L = 0 ft

**Total Time of Concentration**

$$\sum T = T_t + T_{up} + T_p$$

T= 3.48 min

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 13 - DRAINAGE STUDY WITH SOIL REPORT**

**Runoff Coefficient**

Based on Runoff Coefficient Graph from El Dorado Hills - Drainage Manual

C = 1.00

**Rainfall Intensity**

Based on Rainfall Intensity Table from El Dorado Hills- Drainage Manual

10yr I =	2.13	in/hr
100yr I =	3.01	in/hr
2yr/24hr =	0.11	in/hr

**Total Runoff**

$$Q = CiA$$

10yr Q =	4.39	cfs
100yr Q =	6.19	cfs
2yr/24hr Q=	0.23	cfs

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 13 - DRAINAGE STUDY WITH SOIL REPORT**



JOB NAME	Granada Business Property
FILE NAME	22-024 - Storm Water Runoff
JOB #	22-024
USED BY	GV
DATE	March 2, 2021

**Storm Water Runoff - Post Construction - DMA 2**

**Curve Number**

Soil Type = D

Total Project Area

A= 211,652 sqft

Impervious Area (CN=98)

Ai= 183,585 sqft

Pervious Area (CN=80)

Ap= 28,067 sqft

$$CN = \frac{(CN * Ai) + (CN * Ap)}{A}$$

CN= 95

**Time of Concentration**

**Sheet Flow**

$$T_t = \frac{0.007(nL)^{0.8}}{(P_2)^{0.5} * S^{0.4}} * (60)$$

Tt = 1.70 min

n = 0.011  
S0 = 0.01  
P2 = 2.6 in  
L = 95 ft

**Unpaved Concentration Flow**

$$V = 16.1345 \sqrt{S_0}$$

$$T_{up} = V * L$$

V= 1.14 ft/sec  
Tup= 12.87 min

S0 = 0.005  
L = 881 ft

**Paved Concentration Flow**

$$V = 20.3283 \sqrt{S_0}$$

$$T_p = L/V$$

V= 1.57 ft/sec  
Tp= 0.00 min

S0 = 0.006  
L = 0 ft

**Total Time of Concentration**

$$\sum T = T_t + T_{up} + T_p$$

T= 14.57 min

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 13 - DRAINAGE STUDY WITH SOIL REPORT**

**Runoff Coefficient**

Based on Runoff Coefficient Graph from El Dorado Hills - Drainage Manual

$$C = 1.00$$

**Rainfall Intensity**

Based on Rainfall Intensity Table from El Dorado Hills- Drainage Manual

10yr I =	2.13	in/hr
100yr I =	3.01	in/hr
2yr/24hr =	0.11	in/hr

**Total Runoff**

$$Q = CiA$$

10yr Q =	10.36	cfs
100yr Q =	14.62	cfs
2yr/24hr Q =	0.53	cfs

## **Appendix A6**

### Vegetive Swale Calculations

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 13 - DRAINAGE STUDY WITH SOIL REPORT**

WARREN CONSULTING ENGINEERS, INC.

**VEGETATIVE SWALE** CALCULATOR v1.3

**Project Information:**

Date: 4/7/2022

Swale Number (if multiple): 1

Project Name: Granada Business Property

Address: 4420 Business Drive

Shingle Springs, CA 95682

Calculated by: KP

Checked by: KP

**Swale Information:**

Approx. Location on Site: North/East Edge

Captures runoff from Shed 2

Catchment Area: 2.06 in Acres = 89733.6 sf.

Catchment Surface Type: Asph/Conc./Plntr./Roofs. Runoff Coefficient = 1 (see selections)

Peak Flow Capacity Required: 4.39 cfs

Hazardous Material Impacts: 0 0=none  
i.e. gasoline, auto maintenance, etc. 1=yes

Typical Runoff Coefficients	
Asphalt	0.95
Concrete	0.95
Brick	0.85
Drives/Walks	0.85
Roofs	0.95

**Swale Alerts:**

Contact Time	ACCEPTED (Minimum 7 min. Contact time has been met)
WQF Capacity	ACCEPTED (WQF Capacity has been met)
WQF Velocity	ACCEPTED (Velocity in swale is acceptable)
Depth of WQF	ACCEPTED (WQF Depth is within the acceptable range)
Bottom Width	ACCEPTED (Swale bottom width is acceptable)
Swale Slope	ACCEPTED (Swale is within acceptable slope range - NO additional features required)
Side Slopes	ACCEPTED (Side Slopes are acceptable)
Peak Flow	ACCEPTED (Swale has been sized to capacitate the Peak Flow)
Catchment Area	ACCEPTED (Catchment area is acceptable)
Check Dams	NOT REQUIRED (Check Dams NOT required - Swale slope is less than max. allowed)
Under drain	REQUIRED (Underdrain IS required - Slope of swale is less then 1%)
Liner Required	NOT REQUIRED (Liner NOT Required - hazardous materials NOT present)

Justification of  
"ERROR"



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 13 - DRAINAGE STUDY WITH SOIL REPORT**

WARREN CONSULTING ENGINEERS, INC.

## VEGETATIVE SWALE CALCULATOR v1.3

### Introduction:

This calculator uses the methods outlined for a "Vegetative Swale", VS-1 as a Treatment Control Method, in the May 2007 Edition of the Storm water Quality Design Manual for the Sacramento County and South Placer Regions and Fact Sheet TC-30 "Vegetated swale", California Storm water Quality Association (CASQA). References have been made to sections in this document regarding the design methodology. The formulas have been re-organized to solve for the minimum Contact Time by manipulation of swale dimensions and parameters.

### Step 1 - Water Quality Flow (WQF)

$$WQF = C i A$$

Where: C = Rational Runoff Coefficient  Table E-1, Appendix E, page 3  
i = Rainfall Intensity (in./hr.)  0.20 Folsom/Roseville, 0.18 All other  
A = Drainage Area (acres)  shed area (acres= sf./43,560)  
WQF = flow (cfs)

### Step 2 - Water Quality Capacity

$$Q = [(1.486/n)(A^{5/3}/P^{2/3})] \times S^{1/2}$$

$$\text{Time} = \text{Distance} / \text{Velocity}$$

Q = WQF in cfs (see above)  Must be greater than calculated above  
A = Cross sectional Area WQF (ft./ft.)  calculated below  
Side Slope (ft./ft.)  Horiz. to  vertical  
Bottom Width (ft.)  2' min.  
Depth of WQF flow (ft.)  No greater than 4" (2/3 grass ht.)  
n = Manning's "n" (Roughness Coef.)  for WQF (use 0.20 Sac, 0.25 CASQA)  
P = Wetted Perimeter of WQF (ft.)  based on "bottom width" entered above  
S = Swale Slope in flow direction  0.5%(0.005) min., 2.5% (0.025) max.)  
V = Velocity in Swale (ft./sec.)  must be less than 1 ft./sec.  
T = Contact Time (min.)  7 minutes min. SAC, 10 min. CASQA  
Swale Length (ft.)

### Step 3 - Peak Flow Conveyance Capacity (for information)

Q = Peak Flow Conveyance (cfs)  Peak Capacity  
A = Cross sectional Area Swale (ft./ft.)  calculated below  
Side Slope (ft./ft.)  Horiz. to  vertical  
Bottom Width (ft.)  taken from above  
Depth of Swale (ft.)  used to calculate max. conveyance only  
n = Manning's "n" (Roughness Coef.)  0.1 for Peak (0.2 for WQF, see above)  
P = Wetted Perimeter of WQF (ft.)  based on "bottom width" entered above

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**VEGETATIVE SWALE** CALCULATOR v1.3

**Project Information:**

Date: 4/7/2022

Swale Number (if multiple): 1

Project Name: Granada Business Property

Address: 4420 Business Drive

Calculated by: KP

Shingle Springs, CA 95682

Checked by: KP

**Swale Information:**

Approx. Location on Site: North/East Edge

Captures runoff from Shed 2

Catchment Area: 4.86 in Acres = 211701.6 sf.

Catchment Surface Type: Asph/Conc./Plntr./Roofs. Runoff Coefficient = 1 (see selections)

Peak Flow Capacity Required: 10.36 cfs

Hazardous Material Impacts: 0 0=none  
i.e. gasoline, auto maintenance, etc. 1=yes

**Typical Runoff Coefficients**

Asphalt	0.95
Concrete	0.95
Brick	0.85
Drives/Walks	0.85
Roofs	0.95

**Swale Alerts:**

Contact Time	ACCEPTED (Minimum 7 min. Contact time has been met)
WQF Capacity	ERROR (WQF Capacity has NOT been met)
WQF Velocity	ACCEPTED (Velocity in swale is acceptable)
Depth of WQF	ACCEPTED (WQF Depth is within the acceptable range)
Bottom Width	ACCEPTED (Swale bottom width is acceptable)
Swale Slope	ACCEPTED (Swale is within acceptable slope range - NO additional features required)
Side Slopes	ACCEPTED (Side Slopes are acceptable)
Peak Flow	ERROR (Swale cannot handle the peak flow - MUST adjust swale dimensions)
Catchment Area	ACCEPTED (Catchment area is acceptable)
Check Dams	NOT REQUIRED (Check Dams NOT required - Swale slope is less than max. allowed)
Under drain	REQUIRED (Underdrain IS required - Slope of swale is less than 1%)
Liner Required	NOT REQUIRED (Liner NOT Required - hazardous materials NOT present)

Justification of  
"ERROR"

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**VEGETATIVE SWALE** CALCULATOR v1.3

**Introduction:**

This calculator uses the methods outlined for a "Vegetative Swale", VS-1 as a Treatment Control Method, in the May 2007 Edition of the Storm water Quality Design Manual for the Sacramento County and South Placer Regions and Fact Sheet TC-30 "Vegetated swale", California Storm water Quality Association (CASQA). References have been made to sections in this document regarding the design methodology. The formulas have been re-organized to solve for the minimum Contact Time by manipulation of swale dimensions and parameters.

**Step 1 - Water Quality Flow (WQF)**

$$WQF = C i A$$

Where:	C = Rational Runoff Coefficient	<input type="text" value="1.00"/>	Table E-1, Appendix E, page 3
	i = Rainfall Intensity (in./hr.)	<input type="text" value="0.22"/>	0.20 Folsom/Roseville, 0.18 All other
	A = Drainage Area (acres)	<input type="text" value="4.86"/>	shed area (acres= sf./43,560)
	WQF = flow (cfs)	<input type="text" value="1.069"/>	

**Step 2 - Water Quality Capacity**

$$Q = [(1.486/n)(A^{5/3}/P^{2/3})] \times S^{1/2}$$

$$\text{Time} = \text{Distance} / \text{Velocity}$$

Q = WQF in cfs (see above)	<input type="text" value="0.370"/>	Must be greater than calculated above
A = Cross sectional Area WQF (ft./ft.)	<input type="text" value="1.43"/>	calculated below
Side Slope (ft./ft.)	<input type="text" value="4.0"/>	Horiz. to <input type="text" value="1"/> vertical
Bottom Width (ft.)	<input type="text" value="3.00"/>	2' min.
Depth of WQF flow (ft.)	<input type="text" value="0.33"/>	No greater than 4" (2/3 grass ht.)
n = Manning's "n" (Roughness Coef.)	<input type="text" value="0.25"/>	for WQF (use 0.20 Sac, 0.25 CASQA)
P = Wetted Perimeter of WQF (ft.)	<input type="text" value="4.36"/>	based on "bottom width" entered above
S = Swale Slope in flow direction	<input type="text" value="0.0084"/>	0.5%(0.005) min., 2.5% (0.025) max.)
V = Velocity in Swale (ft./sec.)	<input type="text" value="0.259"/>	must be less than 1 ft./sec.
T = Contact Time (min.)	<input type="text" value="60.89"/>	7 minutes min. SAC, 10 min. CASQA
Swale Length (ft.)	<input type="text" value="947.00"/>	

**Step 3 - Peak Flow Conveyance Capacity (for information)**

Q = Peak Flow Conveyance (cfs)	<input type="text" value="9.449"/>	Peak Capacity
A = Cross sectional Area Swale (ft./ft.)	<input type="text" value="7.00"/>	calculated below
Side Slope (ft./ft.)	<input type="text" value="4.0"/>	Horiz. to <input type="text" value="1"/> vertical
Bottom Width (ft.)	<input type="text" value="3.00"/>	taken from above
Depth of Swale (ft.)	<input type="text" value="1.00"/>	used to calculate max. conveyance only
n = Manning's "n" (Roughness Coef.)	<input type="text" value="0.1"/>	0.1 for Peak (0.2 for WQF, see above)
P = Wetted Perimeter of WQF (ft.)	<input type="text" value="7.12"/>	based on "bottom width" entered above

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**Exhibits**



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FILENAME: I:\22-024\CIVIL\DRAINAGE\22-024-PRE SHED .DWG PLOTTED: Friday, April 08, 2022



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FILENAME: I:\22-024\CIVIL\DRAINAGE\22-024-POST SHED.DWG PLOTTED: Friday, April 08, 2022





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NOV 08 2022

EL DORADO COUNTY  
PLANNING AND BUILDING DEPARTMENT



**SYCAMORE** ENVIRONMENTAL CONSULTANTS, INC.

6355 Riverside Blvd., Suite C, Sacramento, CA 95831  
916/ 427-0703

www.sycamoreenv.com

1 November 2019

Mr. Douglas G. Granade, President  
D.G. Granade, Inc.  
4420 Business Drive  
Shingle Springs, CA 95682  
Phone: 530/ 677-7484

***Subject: 2019 Botanical Survey Results for the Shingle Lime Mine Road Parcel Split (APN 109-240-30), El Dorado County, CA***

Dear Mr. Granade,

Sycamore Environmental completed a botanical survey of the Shingle Lime Mine Road Parcel Split site on 30 October 2019. The survey was conducted to update a botanical survey conducted on 18 June 2015. No special-status plants were observed during the 2015 or 2019 botanical surveys.

**STUDY AREA**

The 14.6-acre Biological Study Area (BSA) is located on the east side of Shingle Lime Mine Road south of Durock Road in the Barnett Business Park in El Dorado County, CA (APN 109-240-30; Doug Granade, Trustee, & Barsotti Family LLC). US Highway 50 and the communities of Cameron Park and Shingle Springs are located north of the project. An aerial photograph of the BSA is in Attachment A. Soils present in the BSA consist of Rescue clay, clayey variant on the north side of the property and Rescue sandy loam, 2 to 9 percent slopes in the central and southern portions of the property (NRCS 1974). The BSA is dominated by California annual grassland with many nonnative invasive plant species present. Portions of the BSA have been disturbed in the past by grading and spoils pile stockpiling. Open canopy mixed oak woodland is present on the northwest corner of the property. Old Mill Creek crosses Shingle Lime Mine Road north of the property and does not occur on the property. No chaparral occurs in the BSA.

**METHODS**

The botanical survey was conducted on 18 June 2015 by Sycamore Environmental botanist Mike Bower, M.S. The survey was conducted in accordance with the California Department of Fish and Wildlife protocol for surveying and evaluating impacts to special status native plant populations and natural communities (CDFW 2018), the U.S. Fish and Wildlife Service guidelines for conducting and reporting botanical inventories for federally listed, proposed and candidate plants (USFWS 1996), and the California Native Plant Society botanical survey guidelines (CNPS 2001). Maps and aerial photographs of the BSA are in Attachment A.

A list was obtained from the U.S. Fish and Wildlife Service (USFWS), Sacramento Field Office (dated 30 October 2019). The list identifies federal-listed, candidate, or proposed species that potentially occur in or could be affected by the project. The California Natural Diversity Database (CNDDB) was queried for known occurrences of special-status species near the BSA (Shingle Springs and 8

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*Shingle Lime Mine Road Parcel Split  
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Botanical Survey Results  
El Dorado County, CA*

surrounding quads; data dated 29 September 2019). The California Native Plant Society (CNPS) online inventory of rare and endangered plants was queried for known occurrences of special-status plants in or near the BSA (Shingle Springs and 8 surrounding quads; dated 30 October 2019). The results of the database queries (Attachment B) were used to assemble a table of special-status species with potential to occur (Table 1). Potential to occur was evaluated based on species habitat requirements and range (CNPS 2019; Baldwin, et al., eds. 2012), and habitat present in the BSA. Known CNDDB and herbarium records were reviewed (CDFW 2019; CNPS 2019; CCH 2019).

Table 1. Special-status plants with potential to occur

Special-Status Plant Species	Common Name	Federal Status <sup>a</sup>	State Status/ CNPS Rank <sup>a,b</sup>	Source <sup>c</sup>	Habitat Present? / Species Observed?
<i>Allium jepsonii</i>	Jepson's onion	--	--/ 1B.2	2, 3	Yes/ No
<i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	Big-scale balsamroot	--	--/ 1B.2	2, 3	Yes/ No
<i>Calystegia stebbinsii</i>	Stebbins' morning-glory	E	E/ 1B.1	1, 2, 3	Yes/ No
<i>Calystegia vanzuukiae</i>	Van Zuuk's morning-glory	--	--/ 1B.3	2	Yes/ No
<i>Carex xerophila</i>	Chaparral sedge	--	--/ 1B.2	2, 3	Yes/ No
<i>Ceanothus roderickii</i>	Pine Hill ceanothus	E	R/ 1B.1	1, 2, 3	Yes/ No
<i>Chlorogalum grandiflorum</i>	Red Hills soaproot	--	--/ 1B.2	2, 3	Yes/ No
<i>Crocianthemum</i> (= <i>Helianthemum</i> ) <i>suffrutescens</i>	Bisbee Peak rush-rose	--	--/ 3.2	2, 3	Yes/ No
<i>Eryngium pinnatisectum</i>	Tuolumne button-celery	--	--/ 1B.2	2, 3	Yes/ No
<i>Galium californicum</i> ssp. <i>sierrae</i>	El Dorado bedstraw	E	R/ 1B.2	1, 2, 3	Yes/ No
<i>Packera</i> (= <i>Senecio</i> ) <i>layneae</i>	Layne's butterweed (ragwort)	T	R/ 1B.2	1, 2, 3	Yes/ No
<i>Viburnum ellipticum</i>	Oval-leaved viburnum	--	--/ 2B.3	2, 3	Yes/ No
<i>Wyethia reticulata</i>	El Dorado County mule ears	--	--/ 1B.2	2, 3	Yes/ No

<sup>a</sup> **Listing Status**

E = Endangered; T = Threatened; P = Proposed; C = Candidate; CH = Critical habitat designated; R = California Rare.

<sup>b</sup> **Other Codes:**

CNPS California Rare Plant Rank: 1A = Presumed Extinct in CA; 1B = Rare or Endangered (R/E) in CA and elsewhere; 2 = R/E in CA and more common elsewhere; 3 = Need more information; 4 = Plants of limited distribution.

CNPS Rank Decimal Extensions: .1 = Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat); .2 = Fairly endangered in CA (20-80% of occurrences threatened); .3 = Not very endangered in CA (< 20% of occurrences threatened or no current threats known).

<sup>c</sup> **Sources** 1 = USFWS (2019) letter; 2 = CNDDB query; 3 = CNPS (2019).

Botanical surveys consisted of walking systematically through the BSA while looking for vascular plants. Approximately 2.5 person-hours were spent in the field surveying for special-status plants. The survey was floristic in nature (all plants were identified to the taxonomic level necessary to determine rarity and listing status). Natural communities were classified and mapped with a minimum mapping unit of 0.1 acre (Attachment A).

Precipitation preceding the 30 October 2019 survey was approximately 128% of normal based on historic (1905 to present) and observed precipitation data for 1 October 2018 through 1 October 2019 from the nearby Placerville Gauge (CDEC 2019).

Reference populations of Bisbee Peak rush-rose, Pine Hill ceanothus, Red Hills soaproot, chaparral sedge, and Layne's butterweed were visited in the nearby Cameron Park/Shingle Springs area on 15 October 2019 by Sycamore Environmental botanist Mike Bower, M.S. The Bisbee Peak rush-rose,

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Pine hill ceanothus, chaparral sedge, and Layne's butterweed are perennials with persistent, distinctive, above-ground stems, inflorescences, and/or leaves. These species were evident and identifiable on 15 October, and would be expected to be evident and identifiable during the survey. The Red Hills soaproot was observed with brittle, dry inflorescences that were identifiable based on distinctive morphology, but were not clearly evident. The ability to detect Red Hills soaproot during the survey was therefore limited.

The survey was conducted in late October, at a time of year when some special-status plants might not have been detectable. The ideal time to survey for the plants species with potential to occur (i.e., those listed in Table 1) is May or June, when these species bloom (CNPS 2019; Baldwin et al. 2012). The BSA was recently surveyed on 18 June 2015 (Sycamore Environmental 2015). No special-status plants were observed in the BSA during the 2015 survey conducted during the evident and identifiable period.

**RESULTS**

No special-status plants were observed in the BSA during the botanical survey conducted on 30 October 2019. No special-status plants were observed during a previous botanical survey conducted on 18 June 2015. A list of plant species observed in the BSA is in Attachment C. There are no CNDDDB or herbarium specimen records of special-status plants in the BSA (CDFW 2019; CCH 2019). A map of natural communities is in Attachment A. Natural communities in the BSA include mixed oak woodland (0.80 acre) and California annual grassland (11.61 acres).

Please contact me if you have any questions.

Yours truly,



Mike Bower, M.S.  
Botanist/Biologist

Attachment A Figures 1-3  
Attachment B USFWS, CNDDDB and CNPS Lists  
Attachment C Plant Species Observed List

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**Literature Cited**

- Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, eds. 2012. The Jepson manual: Vascular plants of California, 2<sup>nd</sup> ed. University of California Press, Berkeley, CA.
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- California Native Plant Society (CNPS). Revised 2 June 2001. CNPS Botanical Survey Guidelines. California Native Plant Society, Sacramento, CA.
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- Consortium of California Herbaria (CCH). Accessed 30 October 2019. Herbarium specimen data provided by the participants of the Consortium of California Herbaria. <http://ucjeps.berkeley.edu/consortium/>
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- U.S. Fish and Wildlife Service (USFWS). 1996. Guidelines for conducting and reporting botanical inventories for federally listed, proposed and candidate plants. Sacramento Fish and Wildlife Office, Sacramento, CA. [http://sacramento.fws.gov/es/documents/Listed\\_plant\\_survey\\_guidelines.pdf](http://sacramento.fws.gov/es/documents/Listed_plant_survey_guidelines.pdf)

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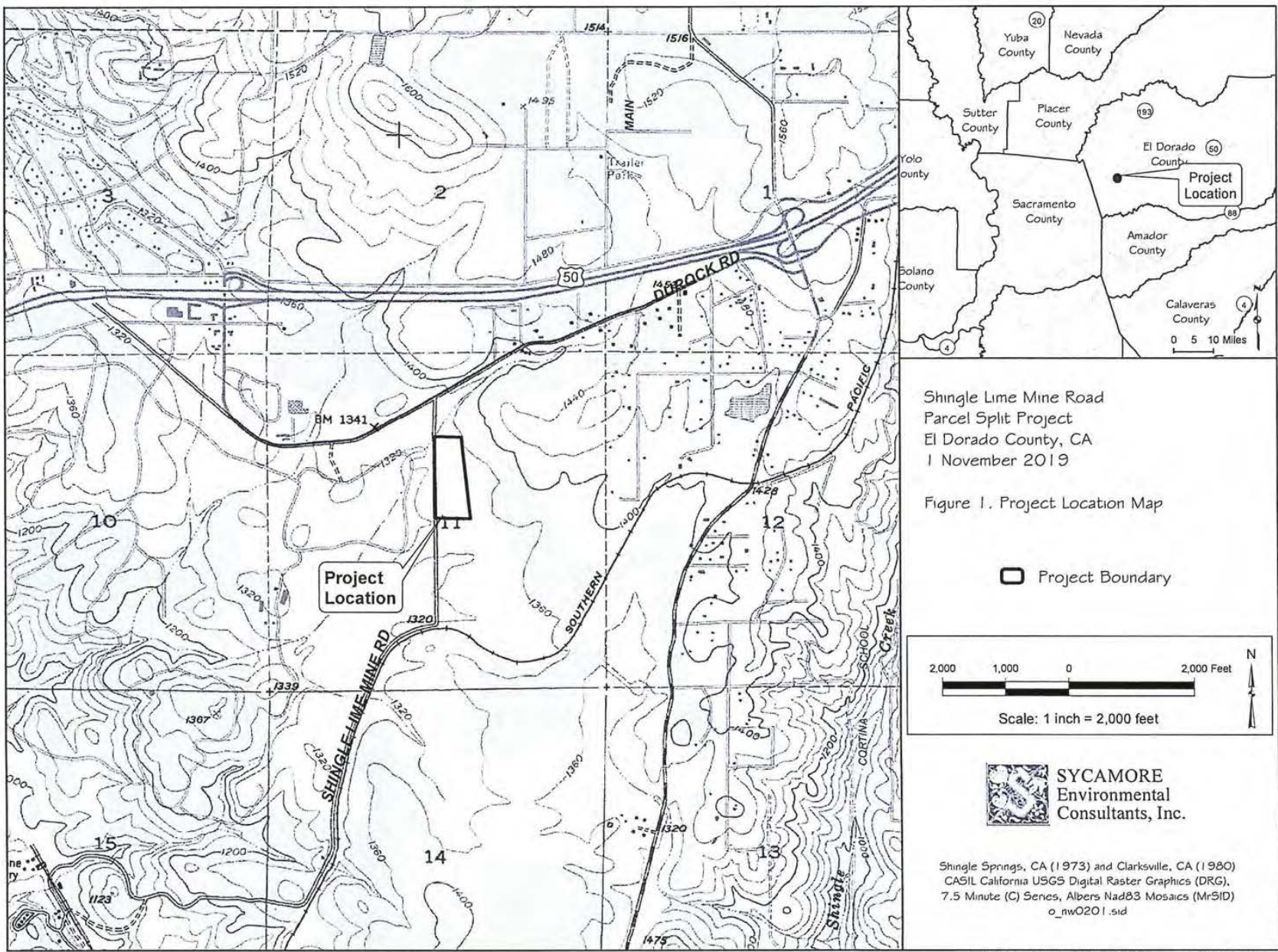
**Attachment A**

Figures 1-3

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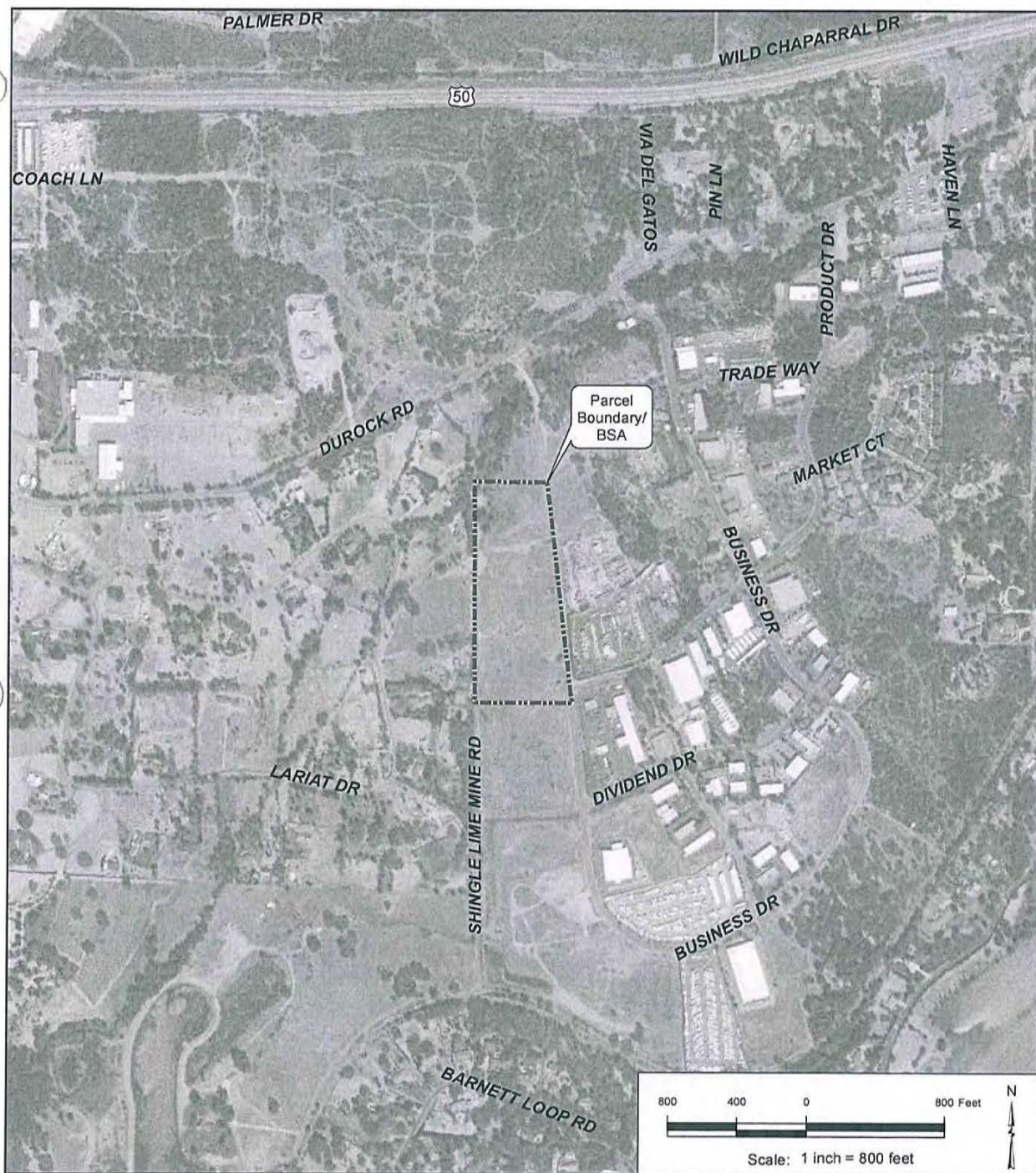


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Shingle Lime Mine Road  
Parcel Split Project  
El Dorado County, CA  
1 November 2019



Botanical Study Area (BSA)



SYCAMORE  
Environmental  
Consultants, Inc.

Aerial Photograph: 26 August 2018  
GEO1 Vivid DigitalGlobe Imagery  
ESRI ArcGIS Basemap Layer

Figure 2. Aerial Photograph



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**Attachment B**

USFWS, CNDDB and CNPS Lists

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## Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species<sup>1</sup> and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

## Amphibians

NAME

STATUS



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California Red-legged Frog <i>Rana draytonii</i>	Threatened
There is final critical habitat for this species. Your location is outside the critical habitat.	
<a href="https://ecos.fws.gov/ecp/species/2891">https://ecos.fws.gov/ecp/species/2891</a>	

## Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i>	Threatened
There is final critical habitat for this species. Your location is outside the critical habitat.	
<a href="https://ecos.fws.gov/ecp/species/321">https://ecos.fws.gov/ecp/species/321</a>	

## Flowering Plants

NAME	STATUS
El Dorado Bedstraw <i>Galium californicum</i> ssp. <i>sierrae</i>	Endangered
No critical habitat has been designated for this species.	
<a href="https://ecos.fws.gov/ecp/species/5209">https://ecos.fws.gov/ecp/species/5209</a>	
Layne's Butterweed <i>Senecio layneae</i>	Threatened
No critical habitat has been designated for this species.	
<a href="https://ecos.fws.gov/ecp/species/4062">https://ecos.fws.gov/ecp/species/4062</a>	
Pine Hill Ceanothus <i>Ceanothus roderickii</i>	Endangered
No critical habitat has been designated for this species.	
<a href="https://ecos.fws.gov/ecp/species/3293">https://ecos.fws.gov/ecp/species/3293</a>	
Pine Hill Flannelbush <i>Fremontodendron californicum</i> ssp. <i>decumbens</i>	Endangered
No critical habitat has been designated for this species.	
<a href="https://ecos.fws.gov/ecp/species/4818">https://ecos.fws.gov/ecp/species/4818</a>	
Stebbins' Morning-glory <i>Calystegia stebbinsii</i>	Endangered
No critical habitat has been designated for this species.	
<a href="https://ecos.fws.gov/ecp/species/3991">https://ecos.fws.gov/ecp/species/3991</a>	

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

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## Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds  
<http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds  
<http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A  
BREEDING SEASON IS INDICATED  
FOR A BIRD ON YOUR LIST, THE  
BIRD MAY BREED IN YOUR  
PROJECT AREA SOMETIME WITHIN  
THE TIMEFRAME SPECIFIED,  
WHICH IS A VERY LIBERAL  
ESTIMATE OF THE DATES INSIDE  
WHICH THE BIRD BREEDS ACROSS  
ITS ENTIRE RANGE. "BREEDS



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ELSEWHERE" INDICATES THAT THE  
BIRD DOES NOT LIKELY BREED IN  
YOUR PROJECT AREA.)

**Bald Eagle** *Haliaeetus leucocephalus*

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

Breeds Jan 1 to Aug 31

**California Thrasher** *Toxostoma redivivum*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Jan 1 to Jul 31

**Common Yellowthroat** *Geothlypis trichas sinuosa*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/2084>

Breeds May 20 to Jul 31

**Golden Eagle** *Aquila chrysaetos*

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1680>

Breeds Jan 1 to Aug 31

**Lawrence's Goldfinch** *Carduelis lawrencei*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9464>

Breeds Mar 20 to Sep 20

**Lewis's Woodpecker** *Melanerpes lewis*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9408>

Breeds Apr 20 to Sep 30

**Nuttall's Woodpecker** *Picoides nuttallii*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/9410>

Breeds Apr 1 to Jul 20

**Oak Titmouse** *Baeolophus inornatus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9656>

Breeds Mar 15 to Jul 15

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Rufous Hummingbird *selasphorus rufus*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/8002>

Song Sparrow *Melospiza melodia*

Breeds Feb 20 to Sep 5

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee *Pipilo maculatus clementae*

Breeds Apr 15 to Jul 20

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/4243>

Tricolored Blackbird *Agelaius tricolor*

Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3910>

Wrentit *Chamaea fasciata*

Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie *Pica nuttalli*

Breeds Apr 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9726>

## Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week.



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To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

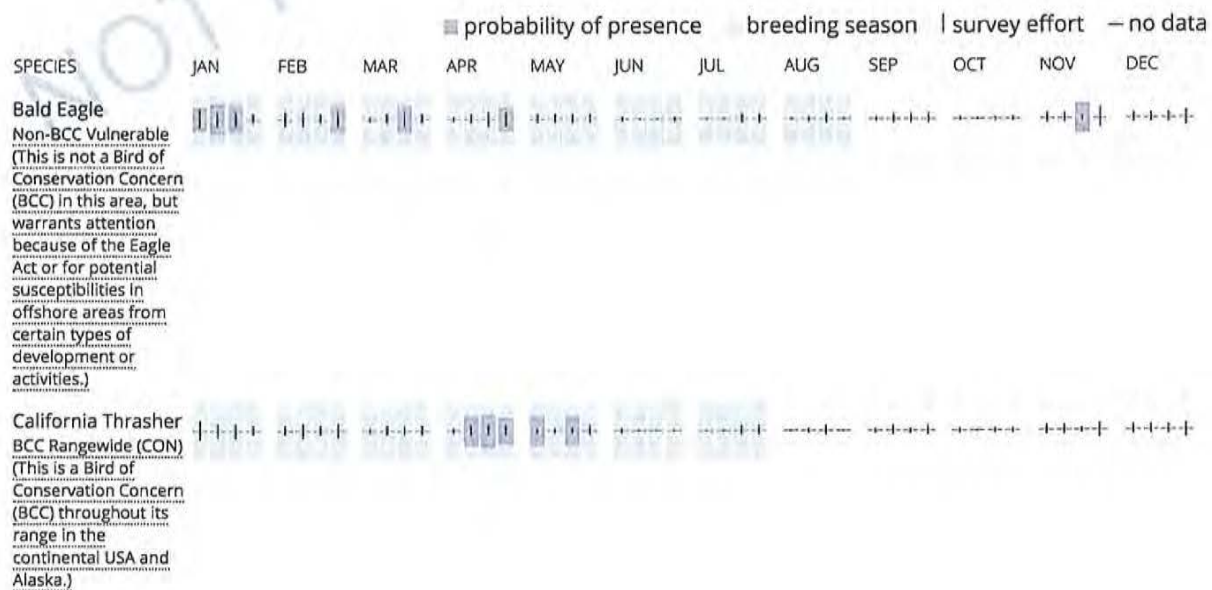
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (—)

### Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



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Common

Yellowthroat

BCC - BCR (This is a  
Bird of Conservation  
Concern (BCC) only in  
particular Bird  
Conservation Regions  
(BCRs) in the  
continental USA)

Golden Eagle

Non-BCC Vulnerable  
(This is not a Bird of  
Conservation Concern  
(BCC) in this area, but  
warrants attention  
because of the Eagle  
Act or for potential  
susceptibilities in  
offshore areas from  
certain types of  
development or  
activities.)

Lawrence's

Goldfinch

BCC Rangewide (CON)  
(This is a Bird of  
Conservation Concern  
(BCC) throughout its  
range in the  
continental USA and  
Alaska.)

Lewis's

Woodpecker

BCC Rangewide (CON)  
(This is a Bird of  
Conservation Concern  
(BCC) throughout its  
range in the  
continental USA and  
Alaska.)

Nuttall's

Woodpecker

BCC - BCR (This is a  
Bird of Conservation  
Concern (BCC) only in  
particular Bird  
Conservation Regions  
(BCRs) in the  
continental USA)

Oak Titmouse

BCC Rangewide (CON)  
(This is a Bird of  
Conservation Concern  
(BCC) throughout its  
range in the  
continental USA and  
Alaska.)

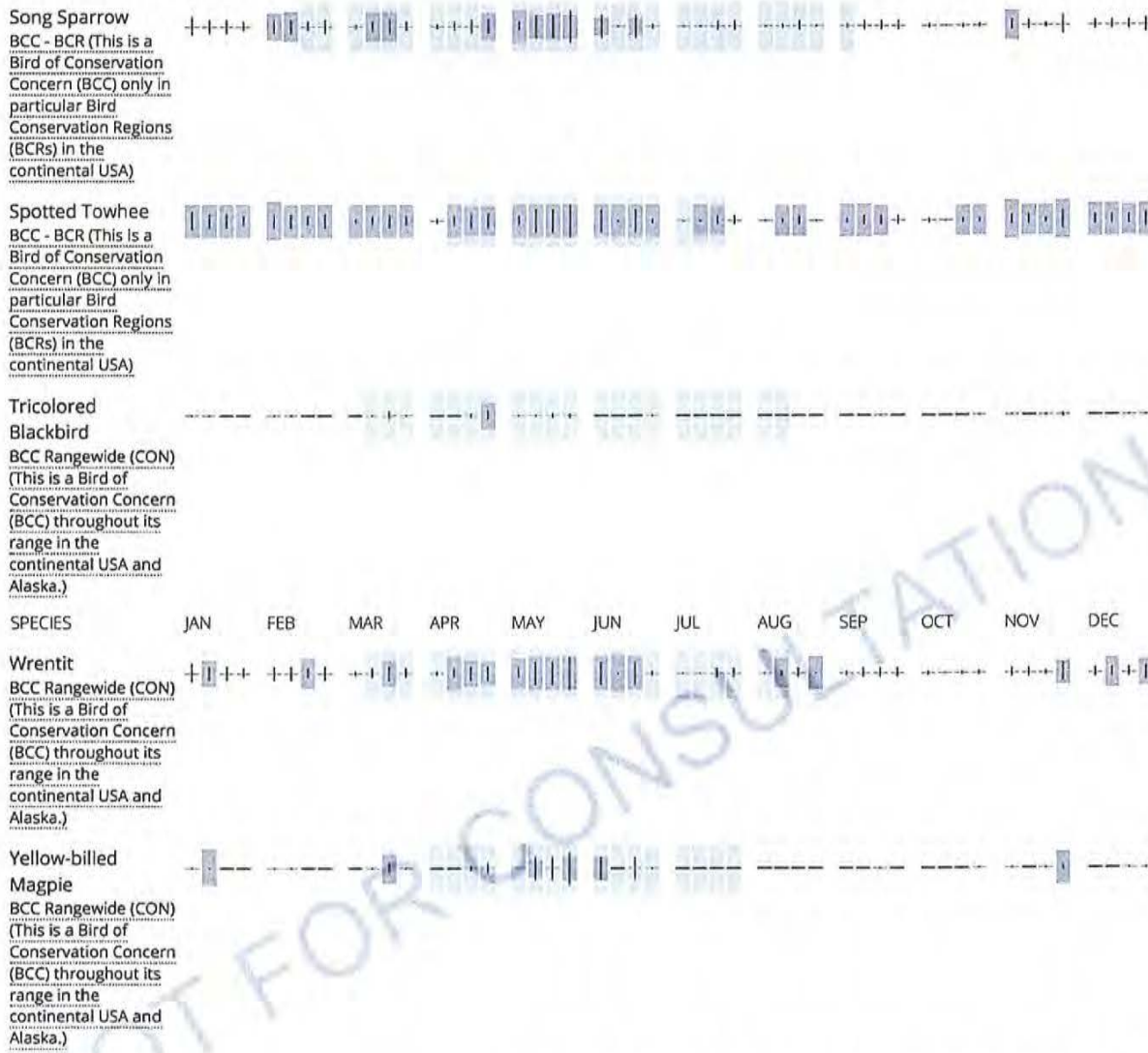
Rufous

Hummingbird

BCC Rangewide (CON)  
(This is a Bird of  
Conservation Concern  
(BCC) throughout its  
range in the  
continental USA and  
Alaska.)



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Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects,

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and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

**What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

**How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

**What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

**Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.



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Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

**What if I have eagles on my list?**

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

**Proper Interpretation and Use of Your Migratory Bird Report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

## Facilities

### National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

### Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

### Wetlands in the National Wetlands Inventory

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Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER FORESTED/SHRUB WETLAND

PSSC

A full description for each wetland code can be found at the National Wetlands Inventory website

#### **Data limitations**

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted.

Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

#### **Data exclusions**

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

#### **Data precautions**

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.



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Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



**Query Criteria:** Quad<span style='color:Red'> IS </span>(Pilot Hill (3812171)<span style='color:Red'> OR </span>Coloma (3812078)<span style='color:Red'> OR </span>Garden Valley (3812077)<span style='color:Red'> OR </span>Clarksville (3812161)<span style='color:Red'> OR </span>Shingle Springs (3812068)<span style='color:Red'> OR </span>Placerville (3812067)<span style='color:Red'> OR </span>Folsom SE (3812151)<span style='color:Red'> OR </span>Latrobe (3812058)<span style='color:Red'> OR </span>Fiddletown (3812057))<br /><span style='color:Red'> AND </span>Taxonomic Group<span style='color:Red'> IS </span>(Dune<span style='color:Red'> OR </span>Scrub<span style='color:Red'> OR </span>Herbaceous<span style='color:Red'> OR </span>Marsh<span style='color:Red'> OR </span>Riparian<span style='color:Red'> OR </span>Woodland<span style='color:Red'> OR </span>Forest<span style='color:Red'> OR </span>Alpine<span style='color:Red'> OR </span>Inland Waters<span style='color:Red'> OR </span>Marine<span style='color:Red'> OR </span>Estuarine<span style='color:Red'> OR </span>Riverine<span style='color:Red'> OR </span>Palustrine<span style='color:Red'> OR </span>Ferns<span style='color:Red'> OR </span>Gymnosperms<span style='color:Red'> OR </span>Monocots<span style='color:Red'> OR </span>Dicots<span style='color:Red'> OR </span>Lichens<span style='color:Red'> OR </span>Bryophytes)



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**Selected Elements by Scientific Name**  
California Department of Fish and Wildlife  
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Allium jepsonii</i> Jepson's onion	PMLIL022V0	None	None	G2	S2	1B.2
<i>Arctostaphylos nissenana</i> Nissenan manzanita	PDERI040V0	None	None	G1	S1	1B.2
<i>Balsamorhiza macrolepis</i> big-scale balsamroot	PDAST11061	None	None	G2	S2	1B.2
<i>Calystegia stebbinsii</i> Stebbins' morning-glory	PDCON040H0	Endangered	Endangered	G1	S1	1B.1
<i>Calystegia vanzuukiae</i> Van Zuuik's morning-glory	PDCON040Q0	None	None	G2Q	S2	1B.3
<i>Carex cyrtostachya</i> Sierra arching sedge	PMCYP03M00	None	None	G2	S2	1B.2
<i>Carex xerophila</i> chaparral sedge	PMCYP03M60	None	None	G2	S2	1B.2
<i>Ceanothus roderickii</i> Pine Hill ceanothus	PDRHA04190	Endangered	Rare	G1	S1	1B.1
<i>Central Valley Drainage Hardhead/Squawfish Stream</i> Central Valley Drainage Hardhead/Squawfish Stream	CARA2443CA	None	None	GNR	SNR	
<i>Chlorogalum grandiflorum</i> Red Hills soaproot	PMLIL0G020	None	None	G3	S3	1B.2
<i>Clarkia biloba ssp. brandegeae</i> Brandegee's clarkia	PDONA05053	None	None	G4G5T4	S4	4.2
<i>Crocianthemum suffrutescens</i> Bisbee Peak rush-rose	PDCIS020F0	None	None	G2?Q	S2?	3.2
<i>Eryngium pinnatisectum</i> Tuolumne button-celery	PDAP10Z0P0	None	None	G2	S2	1B.2
<i>Fremontodendron decumbens</i> Pine Hill flannelbush	PDSTE03030	Endangered	Rare	G1	S1	1B.2
<i>Galium californicum ssp. sierrae</i> El Dorado bedstraw	PDRUB0N0E7	Endangered	Rare	G5T1	S1	1B.2
<i>Horkelia parryi</i> Parry's horkelia	PDROS0W0C0	None	None	G2	S2	1B.2
<i>Packera layneae</i> Layne's ragwort	PDAST8H1V0	Threatened	Rare	G2	S2	1B.2
<i>Sagittaria sanfordii</i> Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2
<i>Viburnum ellipticum</i> oval-leaved viburnum	PDCPR07080	None	None	G4G5	S3?	2B.3
<i>Wyethia reticulata</i> El Dorado County mule ears	PDAST9X0D0	None	None	G2	S2	1B.2

Record Count: 20

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\*The database used to provide updates to the Online Inventory is under construction. [View updates and changes made since May 2019 here.](#)

## Plant List

30 matches found. [Click on scientific name for details](#)

### Search Criteria

Found in Quads 3812171, 3812078, 3812077, 3812161, 3812068, 3812067, 3812151 3812058 and 3812057;

[Modify Search Criteria](#) [Export to Excel](#) [Modify Columns](#) [Modify Sort](#) [Display Photos](#)

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
<a href="#">Allium jepsonii</a>	Jepson's onion	Alliaceae	perennial bulbiferous herb	Apr-Aug	1B.2	S2	G2
<a href="#">Allium sanbornii var. congdonii</a>	Congdon's onion	Alliaceae	perennial bulbiferous herb	Apr-Jul	4.3	S3	G4T3
<a href="#">Allium sanbornii var. sanbornii</a>	Sanborn's onion	Alliaceae	perennial bulbiferous herb	May-Sep	4.2	S3S4	G4T3T4
<a href="#">Arctostaphylos mewukka ssp. truei</a>	True's manzanita	Ericaceae	perennial evergreen shrub	Feb-Jul	4.2	S3	G4?T3
<a href="#">Arctostaphylos nissenana</a>	Nissenan manzanita	Ericaceae	perennial evergreen shrub	Feb-Mar(Jun)	1B.2	S1	G1
<a href="#">Balsamorhiza macrolepis</a>	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	1B.2	S2	G2
<a href="#">Calandrinia breweri</a>	Brewer's calandrinia	Montiaceae	annual herb	(Jan)Mar-Jun	4.2	S4	G4
<a href="#">Calystegia stebbinsii</a>	Stebbins' morning-glory	Convolvulaceae	perennial rhizomatous herb	Apr-Jul	1B.1	S1	G1
<a href="#">Calystegia vanzuukiae</a>	Van Zuuk's morning-glory	Convolvulaceae	perennial rhizomatous herb	May-Aug	1B.3	S2	G2Q
<a href="#">Carex cyrtostachya</a>	Sierra arching sedge	Cyperaceae	perennial herb	May-Aug	1B.2	S2	G2
<a href="#">Carex xerophila</a>	chaparral sedge	Cyperaceae	perennial herb	Mar-Jun	1B.2	S2	G2
<a href="#">Ceanothus fresnensis</a>	Fresno ceanothus	Rhamnaceae	perennial evergreen shrub	May-Jul	4.3	S4	G4
<a href="#">Ceanothus roderickii</a>	Pine Hill ceanothus	Rhamnaceae	perennial evergreen shrub	Apr-Jun	1B.1	S1	G1
<a href="#">Chlorogalum grandiflorum</a>	Red Hills soaproot	Agavaceae	perennial bulbiferous herb	May-Jun	1B.2	S3	G3
<a href="#">Clarkia biloba ssp. brandegeae</a>	Brandegee's clarkia	Onagraceae	annual herb	May-Jul	4.2	S4	G4G5T4
<a href="#">Claytonia parviflora ssp. grandiflora</a>	streambank spring beauty	Montiaceae	annual herb	Feb-May	4.2	S3	G5T3

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
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<u>Crocanthemum suffrutescens</u>	Bisbee Peak rush-rose	Cistaceae	perennial evergreen shrub	Apr-Aug	3.2	S2?	G2?Q
<u>Delphinium hansenii ssp. ewaniamum</u>	Ewan's larkspur	Ranunculaceae	perennial herb	Mar-May	4.2	S3	G4T3
<u>Erigeron miser</u>	starved daisy	Asteraceae	perennial herb	Jun-Oct	1B.3	S3?	G3?
<u>Eriophyllum jepsonii</u>	Jepson's woolly sunflower	Asteraceae	perennial herb	Apr-Jun	4.3	S3	G3
<u>Eryngium pinnatisectum</u>	Tuolumne button-celery	Apiaceae	annual / perennial herb	May-Aug	1B.2	S2	G2
<u>Fremontodendron decumbens</u>	Pine Hill flannelbush	Malvaceae	perennial evergreen shrub	Apr-Jul	1B.2	S1	G1
<u>Galium californicum ssp. sierrae</u>	El Dorado bedstraw	Rubiaceae	perennial herb	May-Jun	1B.2	S1	G5T1
<u>Horkelia parryi</u>	Parry's horkelia	Rosaceae	perennial herb	Apr-Sep	1B.2	S2	G2
<u>Lilium humboldtii ssp. humboldtii</u>	Humboldt lily	Liliaceae	perennial bulbiferous herb	May-Jul(Aug)	4.2	S3	G4T3
<u>Packera layneae</u>	Layne's ragwort	Asteraceae	perennial herb	Apr-Aug	1B.2	S2	G2
<u>Sagittaria sanfordii</u>	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	1B.2	S3	G3
<u>Trichostema rubisepalum</u>	Hernandez bluecurls	Lamiaceae	annual herb	Jun-Aug	4.3	S4	G4
<u>Viburnum ellipticum</u>	oval-leaved viburnum	Adoxaceae	perennial deciduous shrub	May-Jun	2B.3	S3?	G4G5
<u>Wyethia reticulata</u>	El Dorado County mule ears	Asteraceae	perennial herb	Apr-Aug	1B.2	S2	G2

**Suggested Citation**

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**Questions and Comments**

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**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
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ATTACHMENT 14 - BOTANICAL SURVEY**

*Shingle Lime Mine Road Parcel Split  
APN 109-240-30  
Botanical Survey Results  
El Dorado County, CA*

**Attachment C**

Plant Species Observed List

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**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
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**Plant Species Observed**

Family <sup>1</sup>	Scientific Name <sup>1</sup>	Common Name	N/I <sup>2</sup>	Cal-IPC <sup>3</sup>	OBSERVED 18 June 2015	OBSERVED 30 Oct 2019
<b>CONIFERS</b>						
Pinaceae	<i>Pinus sabiniana</i> (sapling)	Gray, ghost, or foothill pine	N		x	x
<b>EUDICOTS</b>						
Anacardiaceae	<i>Toxicodendron diversilobum</i>	Western poison oak	N		x	x
Apiaceae	<i>Daucus</i> sp.	Daucus	--			x
	<i>Torilis arvensis</i>	Tall sock-destroyer	I	Moderate	x	x
Apocynaceae	<i>Asclepias fascicularis</i>	Narrow-leaf milkweed	N		x	x
	<i>Vinca major</i>	Greater periwinkle	I	Moderate	x	x
Asteraceae	<i>Agoseris grandiflora</i>	Agoseris	N		x	
	<i>Ambrosia psilostachya</i>	Western ragweed	N			x
	<i>Anthemis cotula</i>	Mayweed	I		x	
	<i>Artemisia douglasiana</i>	Mugwort	N		x	
	<i>Baccharis pilularis</i>	Coyote brush	N		x	x
	<i>Calycadenia multiglandulosa</i>	Calycadenia	N		x	
	<i>Carduus pycnocephalus</i> ssp. <i>pycnocephalus</i>	Italian thistle	I	Moderate	x	x
	<i>Centaurea solstitialis</i>	Yellow star-thistle	I	High	x	x
	<i>Centromadia fitchii</i>	Spikeweed	N		x	x
	<i>Chondrilla juncea</i>	Skeleton weed	I	Moderate	x	
	<i>Cirsium vulgare</i>	Bull thistle	I	Moderate	x	x
	<i>Dittrichia graveolens</i>	Stinkwort	I	Moderate	x	x
	<i>Grindelia camporum</i>	Gumplant	N		x	x
	<i>Holocarpha virgata</i>	Tarweed, tarplant	N		x	x
	<i>Lactuca serriola</i>	Prickly lettuce	I		x	x
	<i>Lagophylla</i> sp.	Hare-leaf	N		x	
	<i>Leontodon saxatilis</i>	Hairy hawkbit	I		x	x
	<i>Madia elegans</i>	Common madia	N		x	x
	<i>Madia</i> sp.	Tarweed, tarplant	N		x	
	<i>Matricaria discoidea</i>	Pineapple weed, rayless chamomile	I		x	
	<i>Psilocarphus tenellus</i>	Slender woolly-marbles	N		x	
	<i>Senecio vulgaris</i>	Common groundsel	I			x
	<i>Sonchus asper</i> ssp. <i>asper</i>	Prickly sow thistle	I		x	x
	<i>Tragopogon dubius</i>	Yellow salsify	I		x	x
	<i>Wyethia angustifolia</i>	Mule's ears	N		x	
	<i>Xanthium strumarium</i>	Cocklebur	N		x	x
Brassicaceae	<i>Hirschfeldia incana</i>	Perennial, shortpod, or summer mustard	I	Moderate	x	
Caryophyllaceae	<i>Silene gallica</i>	Small-flower catchfly, windmill pink	I		x	
	<i>Spergularia</i> sp.	Sand-spurrey	--		x	x
Convolvulaceae	<i>Calystegia occidentalis</i> ssp. <i>occidentalis</i>	Morning-glory	N		x	
	<i>Convolvulus arvensis</i>	Bindweed, orchard morning-glory	I		x	x
Euphorbiaceae	<i>Croton setigerus</i>	Turkey-mullein	N		x	x
Fabaceae	<i>Acmispon americanus</i> var. <i>americanus</i>	Deervetch, deerweed	N		x	x
	<i>Lotus corniculatus</i>	Bird's-foot trefoil	I		x	
	<i>Lupinus</i> sp.	Lupine	N		x	
	<i>Melilotus albus</i>	White sweetclover	I		x	

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	<i>Trifolium glomeratum</i>	Clustered clover	I		x	
	<i>Trifolium hirtum</i>	Rose clover	I	Limited	x	x
	<i>Vicia hirsuta</i>	Vetch	I		x	x
	<i>Vicia sativa</i>	Vetch	I		x	
	<i>Vicia villosa</i> ssp. <i>villosa</i>	Hairy vetch, winter vetch	I		x	x
Fagaceae	<i>Quercus douglasii</i>	Blue oak	N		x	x
	<i>Quercus lobata</i>	Valley oak, roble	N		x	x
	<i>Quercus wislizeni</i> var. <i>wislizeni</i>	Interior live oak	N		x	x
Gentianaceae	<i>Zeltnera muelenbergii</i>	Monterey centaury	N		x	x
Geraniaceae	<i>Erodium botrys</i>	Storksbill, filaree	I		x	x
	<i>Erodium cicutarium</i>	Redstem filaree	I	Limited	x	x
	<i>Geranium molle</i>	Cranesbill, geranium	I			x
Hypericaceae	<i>Hypericum perforatum</i> ssp. <i>perforatum</i>	Klamathweed	I	Moderate	x	x
Linaceae	<i>Linum</i> sp.	Flax	--		x	x
Lythraceae	<i>Lythrum hyssopifolia</i>	Loosestrife	I	Limited	x	x
Myrsinaceae	<i>Anagallis arvensis</i>	Scarlet pimpernel	I		x	
Onagraceae	<i>Clarkia purpurea</i> ssp. <i>quadrivulnera</i>	Four-spot	N		x	
	<i>Epilobium</i> sp.	Willowherb	--		x	x
Orobanchaceae	<i>Castilleja attenuata</i>	Valley tassels	N		x	
Plantaginaceae	<i>Kickxia</i> sp.	Kickxia	I		x	x
	<i>Plantago erecta</i>	Plantain	N		x	x
Polemoniaceae	<i>Navarretia intertexta</i> ssp. <i>intertexta</i>	Navarretia	N		x	x
	<i>Navarretia pubescens</i>	Navarretia	N		x	
Polygonaceae	<i>Rumex crispus</i>	Curly dock	I	Limited	x	x
	<i>Rumex</i> sp.	Dock	--		x	
Rhamnaceae	<i>Ceanothus cuneatus</i>	California lilac	N		x	x
	<i>Frangula californica</i> ssp. <i>tomentella</i>	California coffee berry	N			x
Rosaceae	<i>Adenostoma fasciculatum</i>	Chamise, greasewood	N			x
	<i>Dryocallis</i> sp.	Dryocallis	N			x
	<i>Poterium sanguisorba</i>	Garden burnet	I		x	x
	<i>Prunus cerasifera</i>	Cherry plum	I	Limited	x	x
	<i>Prunus persica</i>	Peach	I		x	x
	<i>Pyracantha</i> sp.	Firethorn	I		x	x
	<i>Rosa californica</i>	California rose	N		x	x
	<i>Rubus armeniacus</i>	Himalayan blackberry	I	High	x	x
Rubiaceae	<i>Galium parisiense</i>	Wall bedstraw	I		x	
Salicaceae	<i>Populus fremontii</i> ssp. <i>fremontii</i>	Fremont cottonwood	N		x	x
	<i>Salix gooddingii</i>	Goodding's black willow	N		x	x
	<i>Salix laevigata</i>	Red willow	N		x	x
	<i>Salix lasiolepis</i>	Arroyo willow	N			x
Scrophulariaceae	<i>Verbascum blattaria</i>	Moth mullein	I		x	x
Viscaceae	<i>Phoradendron leucarpum</i> ssp. <i>tomentosum</i>	American mistletoe	N		x	x
<b>MONOCOTS</b>						
Agavaceae	<i>Chlorogalum pomeridianum</i> var. <i>pomeridianum</i>	Soaproot	N		x	x
Cyperaceae	<i>Carex tumidicola</i>	Foothill sedge	N		x	
	<i>Cyperus eragrostis</i>	Nutsedge	N		x	x
Iridaceae	<i>Sisyrinchium</i> sp.	Sisyrinchium	N			x
Juncaceae	<i>Juncus balticus</i> ssp. <i>ater</i>	Baltic rush	N			x
	<i>Juncus xiphioides</i>	Iris-leaved rush	N			x
	<i>Luzula</i> sp.	Hairy wood rush	N			x
Poaceae	<i>Aegilops triuncialis</i>	Barbed goat grass	I	High	x	x
	<i>Aira caryophyllea</i>	Silver hair grass	I		x	
	<i>Avena fatua</i>	Wild oat	I	Moderate	x	x
	<i>Brachypodium distachyon</i>	False brome	I	Moderate	x	x



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
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	<i>Bromus diandrus</i>	Ripgut grass	I	Moderate	x	x
	<i>Cryptis schoenoides</i>	Swamp prickly grass	I			x
	<i>Cynodon dactylon</i>	Bermuda grass	I	Moderate		x
	<i>Cynosurus echinatus</i>	Bristly dogtail grass	I	Moderate	x	x
	<i>Dactylis glomerata</i>	Orchard grass	I	Limited	x	x
	<i>Elymus caput-medusae</i>	Medusa head	I	High	x	x
	<i>Elymus triticoides</i>	Beardless wild rye	N		x	
	<i>Festuca myuros</i>	Rattail sixweeks grass	I	Moderate	x	
	<i>Festuca perennis</i>	Rye grass	I	Moderate	x	x
	<i>Gastridium phleoides</i>	Nit grass	I		x	x
	<i>Hordeum marinum</i> ssp. <i>gussoneanum</i>	Mediterranean barley	I	Moderate	x	x
	<i>Hordeum marinum</i> ssp. <i>leporinum</i>	Hare barley	I	Moderate	x	x
	<i>Muhlenbergia rigens</i>	Deer grass	N			x
	<i>Phalaris aquatica</i>	Harding grass	I	Moderate	x	x
	<i>Polypogon monspeliensis</i>	Annual beard grass	I	Limited	x	x
	<i>Stipa miliacea</i> var. <i>miliacea</i>	Smilo grass	I	Limited	x	x
	<i>Stipa</i> sp. (likely <i>S. pulchra</i> or <i>S. cernua</i> )	Needle grass	N		x	x
<b>Themidaceae</b>	<i>Brodiaea elegans</i> ssp. <i>elegans</i>	Harvest brodiaea	N		x	x

<sup>1</sup> Taxonomy follows *The Jepson Manual: Vascular plants of California*, 2nd ed. (Baldwin et al. 2012).

<sup>2</sup> N = Native to CA; I = Introduced.

<sup>3</sup> Negative ecological impact (Cal-IPC 2006).

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 15 - BOTANICAL RESOURCES TECHNICAL MEMORANDUM**



## **TECHNICAL MEMORANDUM**

**To:** Doug Granade  
4420 Business Drive  
Shingle Springs, CA 95682  
Email: [doug.granade@dggranade.com](mailto:doug.granade@dggranade.com)  
Office: 530.677.7484  
Cell: 530.363.0735

**From:** Michael Bower, Senior Botanist

**Date:** January 11, 2023

**Re:** **Botanical Resources Technical Memorandum for the DR22-0009 Granade Business Properties (8) Offices/Warehouses Project, El Dorado County, California / SWCA Project No. 78621**

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## **INTRODUCTION**

SWCA Environmental Consultants (SWCA) has prepared this technical memorandum to document the results of a site visit conducted on January 3, 2023, and the results of previous botanical surveys covering Assessor's Parcel Number (APN) 109-240-032 for the DR22-0009 Granade Business Properties (8) Offices/Warehouses Project (project). During design review, the County of El Dorado (County) requested an updated botanical memo with current project information. Previous botanical surveys include a California Department of Fish and Wildlife (CDFW) protocol botanical survey in June 2015 and a follow-up botanical survey in October 2019. No special-status plants were found during the 2015 and 2019 surveys. No special-status plants are known to occur on the parcel.

## **PROJECT OVERVIEW**

The project is a commercial development on 7.31 acres (APN 109-240-032; Owner: Granade Family Trust – Doug Granade Trustee) at 4755 Business Drive in Shingle Springs, El Dorado County, California (Attachment A: Figure A-1). The project is located to the east of Shingle Lime Mine Road south of Durock Road in the Barnett Business Park. An aerial photograph of the biological study area (BSA) is included in Attachment A (Figure A-2).

## **METHODS**

The first protocol botanical survey was conducted on June 18, 2015, by Sycamore Environmental Consultants (now SWCA) botanist Mike Bower, M.S. The second survey was conducted by Mr. Bower on October 15, 2019. The surveys were conducted in accordance with the CDFW *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018), U.S. Fish and Wildlife Service (USFWS) *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants* (USFWS 1996), and California Native

**ATTACHMENT 15 - BOTANICAL RESOURCES TECHNICAL MEMORANDUM***DR22-0009 Granade Business Properties (8) Offices/Warehouses**Botanical Resources Technical Memorandum*

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Plant Society (CNPS) *CNPS Botanical Survey Guidelines* (CNPS 2001). The 2015 and 2019 surveys covered the entire BSA. Background research performed for the surveys included evaluation of special-status plant species known from the broader region. Special-status species known from the region were determined from a list obtained from the USFWS Sacramento Field Office (USFWS 2023) and a California Natural Diversity Database (CNDDDB) query for known occurrences of special-status species near the BSA (Shingle Springs, California U.S. Geological Survey [USGS] 7.5-minute quadrangle and eight surrounding quadrangles; CDFW 2023). The CNPS online inventory of rare and endangered plants was queried for known occurrences of special-status plants in or near the BSA (Shingle Springs, California and eight surrounding quadrangles: CNPS 2023). The results of the database queries (updated queries in Attachment B) were used to assemble a table of special-status species with potential to occur (Table 1). Potential to occur was evaluated based on species habitat requirements and range (CNPS 2023; Baldwin et al., eds. 2012) and habitat present in the BSA. Known CNDDDB and herbarium records were reviewed (CDFW 2023; Consortium of California Herbaria [CCH] 2023).

The botanical surveys consisted of walking systematically through the BSA while looking for vascular plants. Approximately 5 person-hours were spent in the field surveying for special-status plants in 2015 and 5 person-hours in 2019. The surveys were floristic in nature (all plants were identified to the taxonomic level necessary to determine rarity and listing status). Natural communities were classified and mapped.

Precipitation preceding the June 15, 2015, survey was approximately 66% of normal based on historic (1905–present) and observed precipitation data for October 1, 2014, through May 31, 2015, from the nearby Placerville Gauge (California Data Exchange Center 2019). Precipitation preceding the October 30, 2019, survey was approximately 128% of normal for October 1, 2018, through October 1, 2019. During the 2015 and 2019 surveys, there was no indication that abnormal precipitation preceding the surveys hindered plant growth or phenology, or the ability to detect and identify plant species in the BSA.

The October 2019 survey included visits to reference populations of Bisbee Peak rush-rose (*Crocanthemum* [= *Helianthemum*] *suffrutescens*), Pine Hill ceanothus (*Ceanothus roderickii*), Red Hills soaproot (*Chlorogalum grandiflorum*), chaparral sedge (*Carex xerophila*), and Layne's butterweed (*Packera* [= *Senecio*] *layneae*) in the nearby Cameron Park/Shingle Springs area. Bisbee Peak rush-rose, Pine hill ceanothus, chaparral sedge, and Layne's butterweed are perennials with persistent, distinctive, aboveground stems, inflorescences, and/or leaves. These species were evident and identifiable on October 15, 2019.

The site visit on January 3, 2023, was conducted to verify site conditions and consisted of walking systematically through the BSA while documenting site conditions.

## **RESULTS**

No special-status plants are known to occur on the site and no special-status plants were observed during the 2015, 2019, and 2023 surveys. A map of natural communities is in Attachment A (Figure A-3). Natural communities in the BSA include California annual grassland (5.91 acres), mixed oak woodland (0.80 acre), ruderal/disturbed (0.35 acre), and paved roads (0.25 acre). A list of plant species observed in the BSA is in Attachment C.

Site conditions within the BSA have remained essentially unchanged since 2015. The BSA is dominated by California annual grassland with many nonnative invasive plant species present. Adjacent properties to the south and north were recently developed. The BSA contains Rescue clay and Rescue sandy loam soils (Natural Resources Conservation Service [NRCS] 1974). Portions of the BSA have been disturbed in the past by grading and spoils pile stockpiling. Open canopy mixed oak woodland is present on the northwest

## ATTACHMENT 15 - BOTANICAL RESOURCES TECHNICAL MEMORANDUM

DR22-0009 Granade Business Properties (8) Offices/Warehouses

Botanical Resources Technical Memorandum

corner of the property. Old Mill Creek crosses Shingle Lime Mine Road north of the property but does not occur on the property. No chaparral occurs in the BSA. There are no CNDDDB or herbarium specimen records of special-status plants in the BSA (CDFW 2023; CCH 2023). Table 1 is a summary of the special-status species identified as having potential habitat in the BSA. None of these species were observed in the BSA during the surveys.

Table 1. Special-Status Plants with Potential to Occur

Special Status Plant Species	Common Name	Federal Status <sup>a</sup>	State Status/ CNPS Rank <sup>a,b</sup>	Source <sup>c</sup>	Habitat Present? / Species Observed?
<i>Allium jepsonii</i>	Jepson's onion	--	--/ 1B.2	2, 3	Yes / No
<i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	Big-scale balsamroot	--	--/ 1B.2	2, 3	Yes / No
<i>Calystegia stebbinsii</i>	Stebbins' morning-glory	E	E/ 1B.1	1, 2, 3	Yes / No
<i>Calystegia vanzuukiae</i>	Van Zuuk's morning-glory	--	--/ 1B.3	2	Yes / No
<i>Carex xerophila</i>	Chaparral sedge	--	--/ 1B.2	2, 3	Yes / No
<i>Ceanothus roderickii</i>	Pine Hill ceanothus	E	R/ 1B.1	1, 2, 3	Yes / No
<i>Chlorogalum grandiflorum</i>	Red Hills soaproot	--	--/ 1B.2	2, 3	Yes / No
<i>Crocanthemum</i> (= <i>Helianthemum</i> ) <i>suffrutescens</i>	Bisbee Peak rush-rose	--	--/ 3.2	2, 3	Yes / No
<i>Eryngium pinnatisectum</i>	Tuolumne button-celery	--	--/ 1B.2	2, 3	Yes / No
<i>Packera</i> (= <i>Senecio</i> ) <i>layneae</i>	Layne's butterweed (ragwort)	T	R/ 1B.2	1, 2, 3	Yes / No
<i>Viburnum ellipticum</i>	Oval-leaved viburnum	--	--/ 2B.3	2, 3	Yes / No
<i>Wyethia reticulata</i>	El Dorado County mule ears	--	--/ 1B.2	2, 3	Yes / No

<sup>a</sup> Listing Status:

E = Endangered; T = Threatened; P = Proposed; C = Candidate; CH = Critical habitat designated; R = California Rare.

<sup>b</sup> Other Codes:

CNPS California Rare Plant Rank: 1A = Presumed Extinct in CA; 1B = Rare or Endangered (R/E) in CA and elsewhere; 2 = R/E in CA and more common elsewhere; 3 = Need more information; 4 = Plants of limited distribution.

CNPS Rank Decimal Extensions:   .1 = Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat);   .2 = Fairly endangered in CA (20-80% of occurrences threatened);   .3 = Not very endangered in CA (< 20% of occurrences threatened or no current threats known).<sup>c</sup> Sources: 1 = USFWS (2023) letter; 2 = CNDDDB query (CDFW 2023); 3 = CNPS (2023).

## DISCUSSION

No special-status plants were found during the 2015 and 2019 botanical surveys. Site conditions in January 2023 are similar to those observed during the 2015 and 2019 surveys. No special-status plants are known or expected to occur in the BSA.

**ATTACHMENT 15 - BOTANICAL RESOURCES TECHNICAL MEMORANDUM**

*DR22-0009 Granade Business Properties (8) Offices/Warehouses*

*Botanical Resources Technical Memorandum*

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**LITERATURE CITED**

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**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 15 - BOTANICAL RESOURCES TECHNICAL MEMORANDUM**

**ATTACHMENT A**

**Figures**



ATTACHMENT 15 - BOTANICAL RESOURCES TECHNICAL MEMORANDUM

DR22-0009 Granade Business Properties (8) Offices/Warehouses

Biological Resources Technical Memorandum

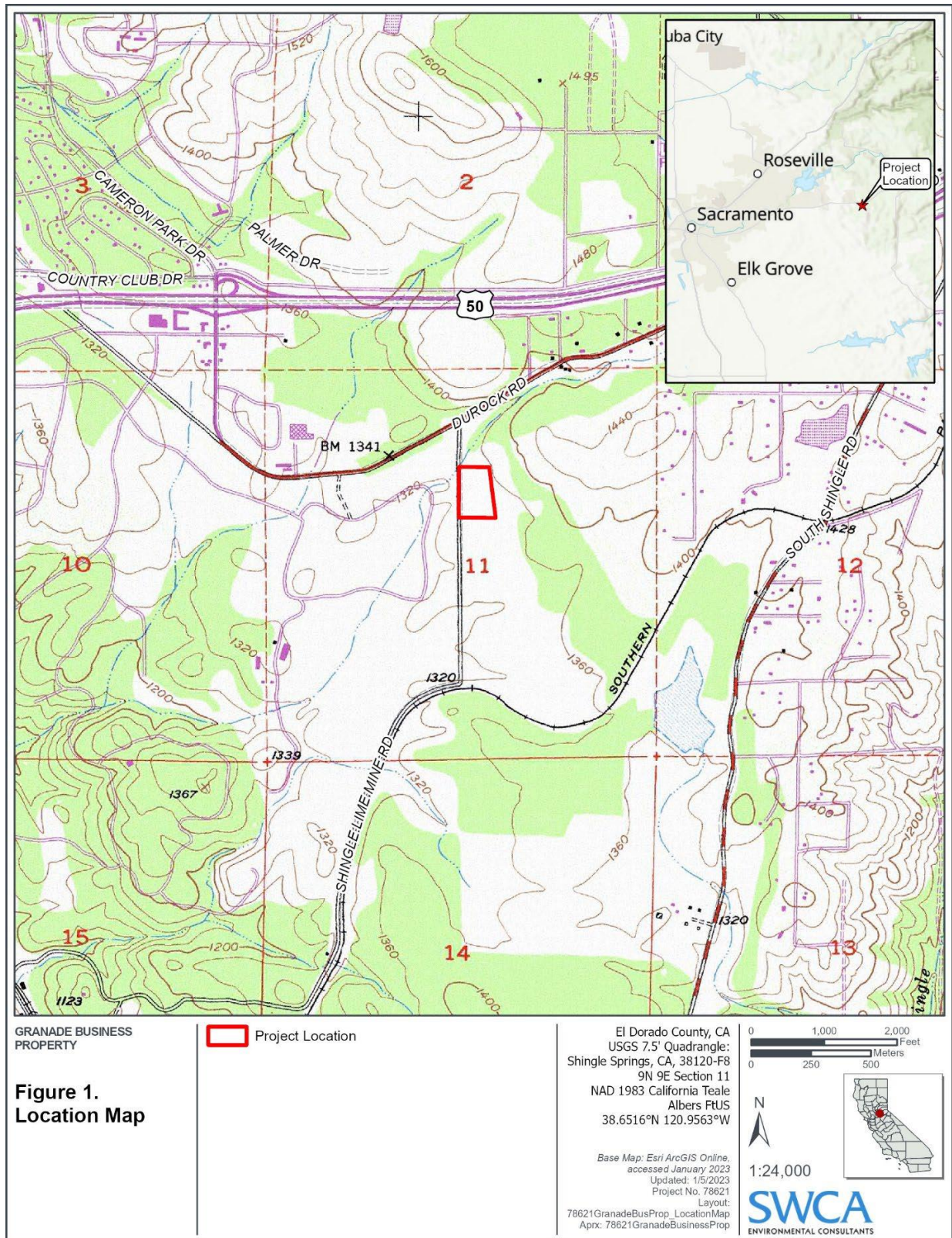


Figure A-1. Project Location Map.



ATTACHMENT 15 - BOTANICAL RESOURCES TECHNICAL MEMORANDUM

DR22-0009 Granade Business Properties (8) Offices/Warehouses

Biological Resources Technical Memorandum



Figure 2. Aerial Photograph.



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS**

**ATTACHMENT 15 - BOTANICAL RESOURCES TECHNICAL MEMORANDUM**

DR22-0009 Granade Business Properties (8) Offices/Warehouses  
Biological Resources Technical Memorandum



**Figure A-3. Botanical Resources Map.**

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 15 - BOTANICAL RESOURCES TECHNICAL MEMORANDUM**

**ATTACHMENT B  
USFWS, CNDDB, CNPS Lists**

# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

## Location

El Dorado County, California



## Local office

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

📅 (916) 414-6713

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846



# Endangered species

**This resource list is for informational purposes only and does not constitute an analysis of project level impacts.**

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species<sup>1</sup> and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

## Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> Wherever found There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. <a href="https://ecos.fws.gov/ecp/species/2891">https://ecos.fws.gov/ecp/species/2891</a>	Threatened

## Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> Wherever found There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. <a href="https://ecos.fws.gov/ecp/species/321">https://ecos.fws.gov/ecp/species/321</a>	Threatened

## Insects

NAME	STATUS
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## Monarch Butterfly *Danaus plexippus*

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9743>

Candidate

## Flowering Plants

NAME

STATUS

### El Dorado Bedstraw *Galium californicum* ssp. *sierrae*

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/5209>

Endangered

### Layne's Butterweed *Senecio layneae*

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/4062>

Threatened

### Pine Hill Ceanothus *Ceanothus roderickii*

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/3293>

Endangered

### Pine Hill Flannelbush *Fremontodendron californicum* ssp. *decumbens*

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/4818>

Endangered

### Stebbins' Morning-glory *Calystegia stebbinsii*

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/3991>

Endangered

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

## Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models



detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
<b>Bald Eagle</b> <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Jan 1 to Aug 31
<b>Belding's Savannah Sparrow</b> <i>Passerculus sandwichensis beldingi</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/8">https://ecos.fws.gov/ecp/species/8</a>	Breeds Apr 1 to Aug 15
<b>Black Swift</b> <i>Cypseloides niger</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/8878">https://ecos.fws.gov/ecp/species/8878</a>	Breeds Jun 15 to Sep 10
<b>Bullock's Oriole</b> <i>Icterus bullockii</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 21 to Jul 25
<b>California Gull</b> <i>Larus californicus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 1 to Jul 31

California Thrasher *Toxostoma redivivum*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Jan 1 to Jul 31

Cassin's Finch *Carpodacus cassinii*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9462>

Breeds May 15 to Jul 15

Clark's Grebe *Aechmophorus clarkii*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Jun 1 to Aug 31

Common Yellowthroat *Geothlypis trichas sinuosa*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/2084>

Breeds May 20 to Jul 31

Golden Eagle *Aquila chrysaetos*

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1680>

Breeds Jan 1 to Aug 31

Lawrence's Goldfinch *Carduelis lawrencei*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9464>

Breeds Mar 20 to Sep 20



Nuttall's Woodpecker *Picoides nuttallii*

Breeds Apr 1 to Jul 20

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/9410>

Oak Titmouse *Baeolophus inornatus*

Breeds Mar 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9656>

Olive-sided Flycatcher *Contopus cooperi*

Breeds May 20 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3914>

Tricolored Blackbird *Agelaius tricolor*

Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3910>

Western Grebe *Aechmophorus occidentalis*

Breeds Jun 1 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/6743>

Wrentit *Chamaea fasciata*

Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie *Pica nuttalli*

Breeds Apr 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9726>

## Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

## Survey Effort (l)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

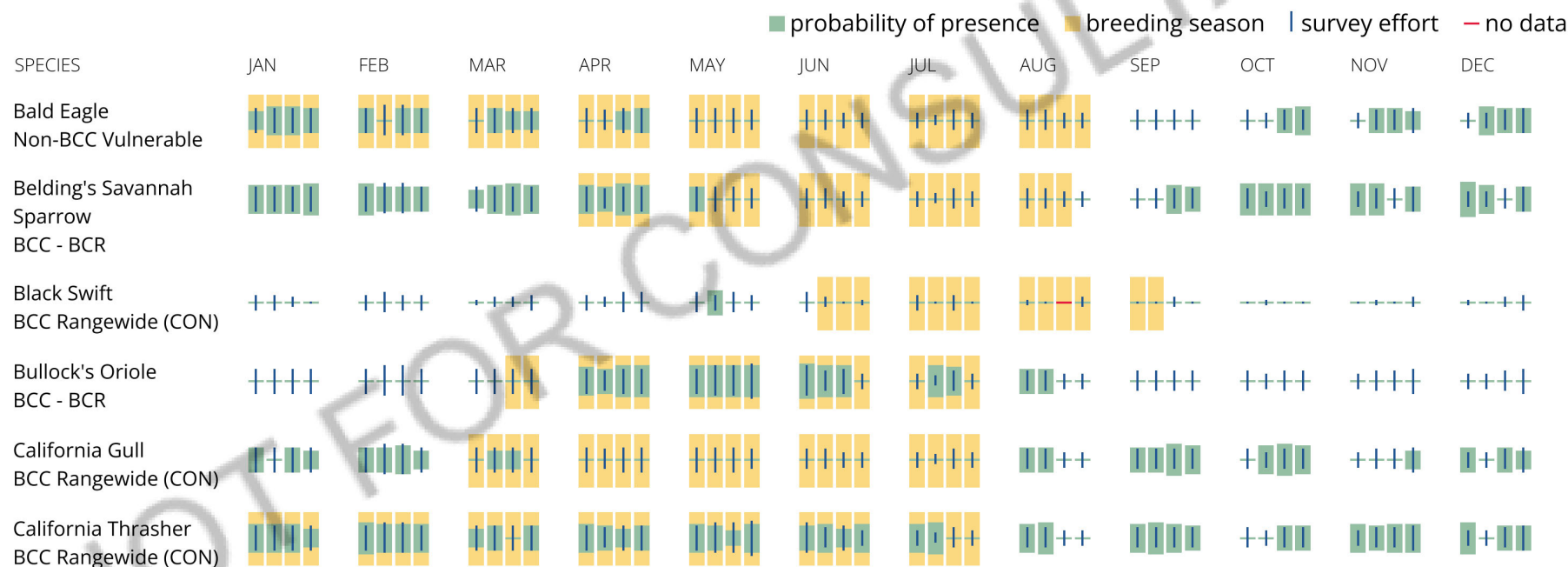
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

## Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Cassin's Finch BCC Rangewide (CON)	++++	++	++++	++++	++	++++	++++	++++	++++	++	++	++++
Clark's Grebe BCC Rangewide (CON)	++++	++++	++	++++	++	++++	++++	++++	++++	++++	++++	++++
Common Yellowthroat BCC - BCR	++	++++	++	++	++	++	++	++	++	++	++	++
Golden Eagle Non-BCC Vulnerable	++	++	++	++	++	++	++	++	++	++	++	++
Lawrence's Goldfinch BCC Rangewide (CON)	++++	++++	++	++	++	++	++	++	++	++	++	++
Nuttall's Woodpecker BCC - BCR	++	++	++	++	++	++	++	++	++	++	++	++
SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Oak Titmouse BCC Rangewide (CON)	++	++	++	++	++	++	++	++	++	++	++	++
Olive-sided Flycatcher BCC Rangewide (CON)	++++	++++	++++	++++	++	++++	++++	++++	++++	++++	++++	++++
Tricolored Blackbird BCC Rangewide (CON)	++++	++++	++	++	++	++++	++++	++++	++	++++	++++	++++
Western Grebe BCC Rangewide (CON)	++++	++++	++++	++	++	++++	++++	++++	++++	++++	++++	++++
Wrentit BCC Rangewide (CON)	++	++	++	++	++	++	++	++	++	++	++	++
Yellow-billed Magpie BCC Rangewide (CON)	++	++	++	++	++	++	++	++	++	++	++	++

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round.

Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure.



To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

#### **What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

#### **What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

#### **How do I know if a bird is breeding, wintering or migrating in my area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

#### **What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

### What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

### Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In



contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

## Facilities

### National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

### Fish hatcheries

There are no fish hatcheries at this location.

### Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

## Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

### Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

### Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

### Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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**Selected Elements by Scientific Name**

California Department of Fish and Wildlife

California Natural Diversity Database

**Query Criteria:** Quad<span style="color:Red"> IS </span>(Shingle Springs (3812068)<span style="color:Red"> OR </span>Clarksville (3812161)<span style="color:Red"> OR </span>Pilot Hill (3812171)<span style="color:Red"> OR </span>Coloma (3812078)<span style="color:Red"> OR </span>Garden Valley (3812077)<span style="color:Red"> OR </span>Placerville (3812067)<span style="color:Red"> OR </span>Fiddletown (3812057)<span style="color:Red"> OR </span>Latrobe (3812058)<span style="color:Red"> OR </span>Folsom SE (3812151))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Accipiter gentilis</i> northern goshawk	ABNKC12060	None	None	G5	S3	SSC
<i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
<i>Allium jepsonii</i> Jepson's onion	PMLIL022V0	None	None	G2	S2	1B.2
<i>Ammodramus savannarum</i> grasshopper sparrow	ABPBXA0020	None	None	G5	S3	SSC
<i>Andrena blennospermatis</i> Blennosperma vernal pool andrenid bee	IIHYM35030	None	None	G2	S2	
<i>Antrozous pallidus</i> pallid bat	AMACC10010	None	None	G4	S3	SSC
<i>Aquila chrysaetos</i> golden eagle	ABNKC22010	None	None	G5	S3	FP
<i>Arctostaphylos nissenana</i> Nissenan manzanita	PDERI040V0	None	None	G1	S1	1B.2
<i>Ardea alba</i> great egret	ABNGA04040	None	None	G5	S4	
<i>Ardea herodias</i> great blue heron	ABNGA04010	None	None	G5	S4	
<i>Athene cunicularia</i> burrowing owl	ABNSB10010	None	None	G4	S3	SSC
<i>Atractelmis wawona</i> Wawona riffle beetle	IICOL58010	None	None	G3	S1S2	
<i>Balsamorhiza macrolepis</i> big-scale balsamroot	PDAST11061	None	None	G2	S2	1B.2
<i>Banksula californica</i> Alabaster Cave harvestman	ILARA14020	None	None	GH	SH	
<i>Bombus occidentalis</i> western bumble bee	IIHYM24252	None	Candidate Endangered	G3	S1	
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
<i>Buteo regalis</i> ferruginous hawk	ABNKC19120	None	None	G4	S3S4	WL
<i>Buteo swainsoni</i> Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	

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**Selected Elements by Scientific Name  
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California Natural Diversity Database**



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Calystegia stebbinsii</i></b> Stebbins' morning-glory	PDCON040H0	Endangered	Endangered	G1	S1	1B.1
<b><i>Calystegia vanzuukiae</i></b> Van Zuuk's morning-glory	PDCON040Q0	None	None	G2Q	S2	1B.3
<b><i>Carex cyrtostachya</i></b> Sierra arching sedge	PMCYP03M00	None	None	G2	S2	1B.2
<b><i>Carex xerophila</i></b> chaparral sedge	PMCYP03M60	None	None	G2	S2	1B.2
<b><i>Ceanothus roderickii</i></b> Pine Hill ceanothus	PDRHA04190	Endangered	Rare	G1	S1	1B.1
<b><i>Central Valley Drainage Hardhead/Squawfish Stream</i></b> Central Valley Drainage Hardhead/Squawfish Stream	CARA2443CA	None	None	GNR	SNR	
<b><i>Chlorogalum grandiflorum</i></b> Red Hills soaproot	PMLIL0G020	None	None	G3	S3	1B.2
<b><i>Clarkia biloba ssp. brandegeeeae</i></b> Brandegee's clarkia	PDONA05053	None	None	G4G5T4	S4	4.2
<b><i>Cosumnoperla hypocrena</i></b> Cosumnes stripetail	IIPLE23020	None	None	G2	S2	
<b><i>Crocianthemum suffrutescens</i></b> Bisbee Peak rush-rose	PDCIS020F0	None	None	G2?Q	S2?	3.2
<b><i>Desmocerus californicus dimorphus</i></b> valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T2T3	S3	
<b><i>Elanus leucurus</i></b> white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
<b><i>Emys marmorata</i></b> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<b><i>Erethizon dorsatum</i></b> North American porcupine	AMAFJ01010	None	None	G5	S3	
<b><i>Eryngium pinnatisectum</i></b> Tuolumne button-celery	PDAP10Z0P0	None	None	G2	S2	1B.2
<b><i>Fremontodendron decumbens</i></b> Pine Hill flannelbush	PDSTE03030	Endangered	Rare	G1	S1	1B.2
<b><i>Galium californicum ssp. sierrae</i></b> El Dorado bedstraw	PDRUB0N0E7	Endangered	Rare	G5T1	S1	1B.2
<b><i>Haliaeetus leucocephalus</i></b> bald eagle	ABNKC10010	Delisted	Endangered	G5	S3	FP
<b><i>Horkelia parryi</i></b> Parry's horkelia	PDROS0W0C0	None	None	G2	S2	1B.2
<b><i>Hydrochara rickseckeri</i></b> Ricksecker's water scavenger beetle	IICOL5V010	None	None	G2?	S2?	
<b><i>Lasionycteris noctivagans</i></b> silver-haired bat	AMACC02010	None	None	G3G4	S3S4	

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## Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Laterallus jamaicensis coturniculus</i></b> California black rail	ABNME03041	None	Threatened	G3T1	S1	FP
<b><i>Myotis yumanensis</i></b> Yuma myotis	AMACC01020	None	None	G5	S4	
<b><i>Oncorhynchus mykiss irideus pop. 11</i></b> steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	G5T2Q	S2	
<b><i>Packera layneae</i></b> Layne's ragwort	PDAST8H1V0	Threatened	Rare	G2	S2	1B.2
<b><i>Pekania pennanti</i></b> Fisher	AMAJF01020	None	None	G5	S2S3	SSC
<b><i>Phrynosoma blainvillii</i></b> coast horned lizard	ARACF12100	None	None	G3G4	S4	SSC
<b><i>Rana boylei pop. 5</i></b> foothill yellow-legged frog - south Sierra DPS	AAABH01055	Proposed Endangered	Endangered	G3T2	S2	
<b><i>Rana draytonii</i></b> California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
<b><i>Riparia riparia</i></b> bank swallow	ABPAU08010	None	Threatened	G5	S2	
<b><i>Sagittaria sanfordii</i></b> Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2
<b><i>Spea hammondi</i></b> western spadefoot	AAABF02020	None	None	G2G3	S3S4	SSC
<b><i>Thamnophis gigas</i></b> giant gartersnake	ARADB36150	Threatened	Threatened	G2	S2	
<b><i>Viburnum ellipticum</i></b> oval-leaved viburnum	PDCPR07080	None	None	G4G5	S3?	2B.3
<b><i>Wyethia reticulata</i></b> EI Dorado County mule ears	PDAST9X0D0	None	None	G2	S2	1B.2

Record Count: 53

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[CNPS Rare Plant Inventory](#).



### Search Results

17 matches found. Click on scientific name for details

Search Criteria: [CRPR](#) is one of [1A:1B:2A:2B] , [Quad](#) is one of [3812068:3812161:3812171:3812078:3812077:3812067:3812057:3812058:3812151]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
<a href="#">Allium jepsonii</a>	Jepson's onion	Alliaceae	perennial bulbiferous herb	Apr-Aug	None	None	G2	S2	1B.2	 © 2019 Steven Perry
<a href="#">Arctostaphylos nissenana</a>	Nissenan manzanita	Ericaceae	perennial evergreen shrub	Feb-Mar	None	None	G1	S1	1B.2	No Photo Available
<a href="#">Balsamorhiza macrolepis</a>	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	None	None	G2	S2	1B.2	 ©1998 Dean Wm. Taylor
<a href="#">Calystegia stebbinsii</a>	Stebbins' morning-glory	Convolvulaceae	perennial rhizomatous herb	Apr-Jul	FE	CE	G1	S1	1B.1	No Photo Available
<a href="#">Calystegia vanzuukiae</a>	Van Zuuk's morning-glory	Convolvulaceae	perennial rhizomatous herb	May-Aug	None	None	G2Q	S2	1B.3	No Photo Available
<a href="#">Carex cyrtostachya</a>	Sierra arching sedge	Cyperaceae	perennial herb	May-Aug	None	None	G2	S2	1B.2	No Photo Available
<a href="#">Carex xerophila</a>	chaparral sedge	Cyperaceae	perennial herb	Mar-Jun	None	None	G2	S2	1B.2	No Photo Available
<a href="#">Ceanothus roderickii</a>	Pine Hill ceanothus	Rhamnaceae	perennial evergreen shrub	Apr-Jun	FE	CR	G1	S1	1B.1	No Photo Available
<a href="#">Chlorogalum grandiflorum</a>	Red Hills soaproot	Agavaceae	perennial bulbiferous herb	(Apr)May-Jun	None	None	G3	S3	1B.2	No Photo Available
<a href="#">Eryngium pinnatisectum</a>	Tuolumne button-celery	Apiaceae	annual/perennial herb	May-Aug	None	None	G2	S2	1B.2	 © 2007 Robert E. Preston, Ph.D.
<a href="#">Fremontodendron decumbens</a>	Pine Hill flannelbush	Malvaceae	perennial evergreen shrub	Apr-Jul	FE	CR	G1	S1	1B.2	No Photo Available



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Available

<u><i>Galium californicum ssp. sierrae</i></u>	El Dorado bedstraw	Rubiaceae	perennial herb	May-Jun	FE	CR	G5T1	S1	1B.2	 © 2019 John Doyen
<u><i>Horkelia parryi</i></u>	Parry's horkelia	Rosaceae	perennial herb	Apr-Sep	None	None	G2	S2	1B.2	 © 2009 Barry Breckling
<u><i>Packera layneae</i></u>	Layne's ragwort	Asteraceae	perennial herb	Apr-Aug	FT	CR	G2	S2	1B.2	No Photo Available
<u><i>Sagittaria sanfordii</i></u>	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May- Oct(Nov)	None	None	G3	S3	1B.2	 ©2013 Debra L. Cook
<u><i>Viburnum ellipticum</i></u>	oval-leaved viburnum	Viburnaceae	perennial deciduous shrub	May-Jun	None	None	G4G5	S3?	2B.3	 © 2006 Tom Engstrom
<u><i>Wyethia reticulata</i></u>	El Dorado County mule ears	Asteraceae	perennial herb	Apr-Aug	None	None	G2	S2	1B.2	No Photo Available

Showing 1 to 17 of 17 entries

**Suggested Citation:**

California Native Plant Society, Rare Plant Program. 2023. Rare Plant Inventory (online edition, v9-01 1.5). Website <https://www.rareplants.cnps.org> [accessed 3 January 2023].

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**ATTACHMENT C**

**Plant Species Observed List (2019)**

**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
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**Plant Species Observed**

Family <sup>1</sup>	Scientific Name <sup>1</sup>	Common Name	N/I <sup>2</sup>	Cal-IPC <sup>3</sup>	OBSERVED 18 June 2015	OBSERVED 30 Oct 2019
<b>CONIFERS</b>						
<b>Pinaceae</b>	<i>Pinus sabiniana</i> (sapling)	Gray, ghost, or foothill pine	N		x	x
<b>EUDICOTS</b>						
<b>Anacardiaceae</b>	<i>Toxicodendron diversilobum</i>	Western poison oak	N		x	x
<b>Apiaceae</b>	<i>Daucus</i> sp.	Daucus	--			x
	<i>Torilis arvensis</i>	Tall sock-destroyer	I	Moderate	x	x
<b>Apocynaceae</b>	<i>Asclepias fascicularis</i>	Narrow-leaf milkweed	N		x	x
	<i>Vinca major</i>	Greater periwinkle	I	Moderate	x	x
<b>Asteraceae</b>	<i>Agoseris grandiflora</i>	Agoseris	N		x	
	<i>Ambrosia psilostachya</i>	Western ragweed	N			x
	<i>Anthemis cotula</i>	Mayweed	I		x	
	<i>Artemisia douglasiana</i>	Mugwort	N		x	
	<i>Baccharis pilularis</i>	Coyote brush	N		x	x
	<i>Calycadenia multiglandulosa</i>	Calycadenia	N		x	
	<i>Carduus pycnocephalus</i> ssp. <i>pycnocephalus</i>	Italian thistle	I	Moderate	x	x
	<i>Centaurea solstitialis</i>	Yellow star-thistle	I	High	x	x
	<i>Centromadia fitchii</i>	Spikeweed	N		x	x
	<i>Chondrilla juncea</i>	Skeleton weed	I	Moderate	x	
	<i>Cirsium vulgare</i>	Bull thistle	I	Moderate	x	x
	<i>Dittrichia graveolens</i>	Stinkwort	I	Moderate	x	x
	<i>Grindelia camporum</i>	Gumplant	N		x	x
	<i>Holocarpha virgata</i>	Tarweed, tarplant	N		x	x
	<i>Lactuca serriola</i>	Prickly lettuce	I		x	x
	<i>Lagophylla</i> sp.	Hare-leaf	N		x	
	<i>Leontodon saxatilis</i>	Hairy hawkbit	I		x	x
	<i>Madia elegans</i>	Common madia	N		x	x
	<i>Madia</i> sp.	Tarweed, tarplant	N		x	
	<i>Matricaria discoidea</i>	Pineapple weed, rayless chamomile	I		x	
	<i>Psilocarphus tenellus</i>	Slender woolly-marbles	N		x	
	<i>Senecio vulgaris</i>	Common groundsel	I			x
	<i>Sonchus asper</i> ssp. <i>asper</i>	Prickly sow thistle	I		x	x
	<i>Tragopogon dubius</i>	Yellow salsify	I		x	x
	<i>Wyethia angustifolia</i>	Mule's ears	N		x	
	<i>Xanthium strumarium</i>	Cocklebur	N		x	x
<b>Brassicaceae</b>	<i>Hirschfeldia incana</i>	Perennial, shortpod, or summer mustard	I	Moderate	x	
<b>Caryophyllaceae</b>	<i>Silene gallica</i>	Small-flower catchfly, windmill pink	I		x	
	<i>Spergularia</i> sp.	Sand-spurrey	--		x	x
<b>Convolvulaceae</b>	<i>Calystegia occidentalis</i> ssp. <i>occidentalis</i>	Morning-glory	N		x	
	<i>Convolvulus arvensis</i>	Bindweed, orchard morning-glory	I		x	x
<b>Euphorbiaceae</b>	<i>Croton setigerus</i>	Turkey-mullein	N		x	x
<b>Fabaceae</b>	<i>Acmispon americanus</i> var. <i>americanus</i>	Deervetch, deerweed	N		x	x
	<i>Lotus corniculatus</i>	Bird's-foot trefoil	I		x	
	<i>Lupinus</i> sp.	Lupine	N		x	
	<i>Melilotus albus</i>	White sweetclover	I		x	

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	<i>Trifolium glomeratum</i>	Clustered clover	I		x	
	<i>Trifolium hirtum</i>	Rose clover	I	Limited	x	x
	<i>Vicia hirsuta</i>	Vetch	I		x	x
	<i>Vicia sativa</i>	Vetch	I		x	
	<i>Vicia villosa</i> ssp. <i>villosa</i>	Hairy vetch, winter vetch	I		x	x
<b>Fagaceae</b>	<i>Quercus douglasii</i>	Blue oak	N		x	x
	<i>Quercus lobata</i>	Valley oak, roble	N		x	x
	<i>Quercus wislizeni</i> var. <i>wislizeni</i>	Interior live oak	N		x	x
<b>Gentianaceae</b>	<i>Zeltnera muehlenbergii</i>	Monterey centaury	N		x	x
<b>Geraniaceae</b>	<i>Erodium botrys</i>	Storcksbill, filaree	I		x	x
	<i>Erodium cicutarium</i>	Redstem filaree	I	Limited	x	x
	<i>Geranium molle</i>	Cranesbill, geranium	I			x
<b>Hypericaceae</b>	<i>Hypericum perforatum</i> ssp. <i>perforatum</i>	Klamathweed	I	Moderate	x	x
<b>Linaceae</b>	<i>Linum</i> sp.	Flax	--		x	x
<b>Lythraceae</b>	<i>Lythrum hyssopifolia</i>	Loosestrife	I	Limited	x	x
<b>Myrsinaceae</b>	<i>Anagallis arvensis</i>	Scarlet pimpernel	I		x	
<b>Onagraceae</b>	<i>Clarkia purpurea</i> ssp. <i>quadrivulnera</i>	Four-spot	N		x	
	<i>Epilobium</i> sp.	Willowherb	--		x	x
<b>Orobanchaceae</b>	<i>Castilleja attenuata</i>	Valley tassels	N		x	
<b>Plantaginaceae</b>	<i>Kickxia</i> sp.	Kickxia	I		x	x
	<i>Plantago erecta</i>	Plantain	N		x	x
<b>Polemoniaceae</b>	<i>Navarretia intertexta</i> ssp. <i>intertexta</i>	Navarretia	N		x	x
	<i>Navarretia pubescens</i>	Navarretia	N		x	
<b>Polygonaceae</b>	<i>Rumex crispus</i>	Curly dock	I	Limited	x	x
	<i>Rumex</i> sp.	Dock	--		x	
<b>Rhamnaceae</b>	<i>Ceanothus cuneatus</i>	California-lilac	N		x	x
	<i>Frangula californica</i> ssp. <i>tomentella</i>	California coffee berry	N			x
<b>Rosaceae</b>	<i>Adenostoma fasciculatum</i>	Chamise, greasewood	N			X
	<i>Drymocallis</i> sp.	Drymocallis	N			x
	<i>Poterium sanguisorba</i>	Garden burnet	I		x	x
	<i>Prunus cerasifera</i>	Cherry plum	I	Limited	x	x
	<i>Prunus persica</i>	Peach	I		x	x
	<i>Pyracantha</i> sp.	Firethorn	I		x	x
	<i>Rosa californica</i>	California rose	N		x	x
	<i>Rubus armeniacus</i>	Himalayan blackberry	I	High	x	x
<b>Rubiaceae</b>	<i>Galium parisiense</i>	Wall bedstraw	I		x	
<b>Salicaceae</b>	<i>Populus fremontii</i> ssp. <i>fremontii</i>	Fremont cottonwood	N		x	x
	<i>Salix gooddingii</i>	Goodding's black willow	N		x	x
	<i>Salix laevigata</i>	Red willow	N		x	x
	<i>Salix lasiolepis</i>	Arroyo willow	N			x
<b>Scrophulariaceae</b>	<i>Verbascum blattaria</i>	Moth mullein	I		x	x
<b>Viscaceae</b>	<i>Phoradendron leucarpum</i> ssp. <i>tomentosum</i>	American mistletoe	N		x	x
<b>MONOCOTS</b>						
<b>Agavaceae</b>	<i>Chlorogalum pomeridianum</i> var. <i>pomeridianum</i>	Soaproot	N		x	x
<b>Cyperaceae</b>	<i>Carex tumulicola</i>	Foothill sedge	N		x	
	<i>Cyperus eragrostis</i>	Nutsedge	N		x	x
<b>Iridaceae</b>	<i>Sisyrinchium</i> sp.	Sisyrinchium	N			x
<b>Juncaceae</b>	<i>Juncus balticus</i> ssp. <i>ater</i>	Baltic rush	N			x
	<i>Juncus xiphioides</i>	Iris-leaved rush	N			x
	<i>Luzula</i> sp.	Hairy wood rush	N			x
<b>Poaceae</b>	<i>Aegilops triuncialis</i>	Barbed goat grass	I	High	x	x
	<i>Aira caryophyllea</i>	Silver hair grass	I		x	
	<i>Avena fatua</i>	Wild oat	I	Moderate	x	x
	<i>Brachypodium distachyon</i>	False brome	I	Moderate	x	x

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	<i>Bromus diandrus</i>	Ripgut grass	I	Moderate	x	x
	<i>Crypsis schoenoides</i>	Swamp prickly grass	I			x
	<i>Cynodon dactylon</i>	Bermuda grass	I	Moderate		x
	<i>Cynosurus echinatus</i>	Bristly dogtail grass	I	Moderate	x	x
	<i>Dactylis glomerata</i>	Orchard grass	I	Limited	x	x
	<i>Elymus caput-medusae</i>	Medusa head	I	High	x	x
	<i>Elymus triticoides</i>	Beardless wild rye	N		x	
	<i>Festuca myuros</i>	Rattail sixweeks grass	I	Moderate	x	
	<i>Festuca perennis</i>	Rye grass	I	Moderate	x	x
	<i>Gastridium phleoides</i>	Nit grass	I		x	x
	<i>Hordeum marinum</i> ssp. <i>gussoneanum</i>	Mediterranean barley	I	Moderate	x	x
	<i>Hordeum murinum</i> ssp. <i>leporinum</i>	Hare barley	I	Moderate	x	x
	<i>Muhlenbergia rigens</i>	Deer grass	N			x
	<i>Phalaris aquatica</i>	Harding grass	I	Moderate	x	x
	<i>Polypogon monspeliensis</i>	Annual beard grass	I	Limited	x	x
	<i>Stipa miliacea</i> var. <i>miliacea</i>	Smilo grass	I	Limited	x	x
	<i>Stipa</i> sp. (likely <i>S. pulchra</i> or <i>S. cernua</i> )	Needle grass	N		x	x
<b>Themidaceae</b>	<i>Brodiaea elegans</i> ssp. <i>elegans</i>	Harvest brodiaea	N		x	x

<sup>1</sup> Taxonomy follows *The Jepson Manual: Vascular plants of California*, 2nd ed. (Baldwin et al. 2012).

<sup>2</sup> N = Native to CA; I = Introduced.

<sup>3</sup> Negative ecological impact (Cal-IPC 2006).

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## **TECHNICAL MEMORANDUM**

**To:** Doug Granade  
4420 Business Drive  
Shingle Springs, CA 95682  
Email: [doug.granade@dggranade.com](mailto:doug.granade@dggranade.com)  
Office: 530.677.7484  
Cell: 530.363.0735

**From:** Michael Bower, Senior Botanist  
Alec Villanueva, Staff Biologist

**Date:** June 13, 2023

**Re:** **Biological Resources Technical Memorandum for the DR22-0009 Granade Business Properties (8) Offices/Warehouses Project, El Dorado County, California / SWCA Project No. 78621**

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## **INTRODUCTION**

SWCA Environmental Consultants (SWCA) has prepared this technical memorandum to document the results of the biological survey conducted on Assessor's Parcel Number (APN) 109-240-032 for the DR22-0009 Granade Business Properties (8) Offices/Warehouses Project (project). During design review, the County of El Dorado (County) requested a wildlife survey and memo with current project information. California Department of Fish and Wildlife (CDFW) protocol botanical surveys were previously completed on this site and are documented in a separate memorandum (SWCA 2023). No special-status plants or wildlife are known to occur on the parcel.

## **PROJECT OVERVIEW**

The project is a commercial development on 7.31 acres (APN 109-240-032; Owner: Granade Family Trust – Doug Granade Trustee) at 4755 Business Drive in Shingle Springs, El Dorado County, California (Attachment A: Figure A-1). The project area is located to the east of Shingle Lime Mine Road south of Durock Road in the Barnett Business Park. An aerial photograph of the biological study area (BSA) is included in Attachment A (Figure A-2). The BSA consists of the entire 7.31-acre parcel.

## **METHODS**

### **Field Surveys**

SWCA Staff Biologist Alec Villanueva conducted a general biological survey of the BSA on June 6, 2023. The purpose of the survey was to verify site conditions, determine habitat suitability for special-status wildlife, and document any special-status wildlife or their sign. The survey consisted of walking systematically through the BSA while documenting site conditions and recording any notable habitat



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features that may support special-status species known to occur in the region based on the literature and database reviews.

## **Literature Review and Database Queries**

Background research performed for the survey included evaluation of special-status wildlife species known from the broader region, which were determined from an Information for Planning and Consultation (IPaC) list obtained from the USFWS Sacramento Field Office (USFWS 2023) and a California Natural Diversity Database (CNDDDB) query for known occurrences of special-status species near the BSA (Shingle Springs, California U.S. Geological Survey [USGS] 7.5-minute quadrangle and eight surrounding quadrangles) (CDFW 2023). The results of the database queries (Attachment B) were used to assemble a table of special-status species with potential to occur (Table 1). Potential to occur was evaluated based on species habitat requirements and range and habitat present in the BSA, as well as proximity of known records.

## **RESULTS**

### **Existing Conditions**

Site conditions within the northern half of the BSA have remained essentially unchanged since 2015. The southernmost portion of the BSA was recently disturbed due to the development of an adjacent warehouse facility located south of the BSA. The southern portion of the BSA has been disturbed in the past by grading and spoils pile stockpiling. The BSA is dominated by California annual grassland with many nonnative invasive plant species present. Open canopy mixed oak woodland is present on the northwest corner of the property. No chaparral occurs in the BSA. Old Mill Creek crosses Shingle Lime Mine Road approximately 40 feet northwest of the BSA; however, no portion of the creek occurs on the property. An approximately 20-foot-wide driveway occurs between the creek and the BSA and connects Shingle Lime Road to the developed area north of the BSA. Adjacent properties to the south and north were recently developed.

Natural communities in the BSA include California annual grassland (5.91 acres), mixed oak woodland (0.80 acre), and ruderal/disturbed (0.35 acre). The southernmost portion of the BSA has been previously disturbed and is largely barren aside from some ruderal plants. Mixed oak woodland occurs in the northwest corner of the project site. The California annual grassland community is dominated by nonnative Harding grass (*Phalaris aquatica*) in the northeast corner of the BSA bordering the mixed oak woodland and by nonnative wild oat (*Avena* sp.) throughout the rest of the project site. A map of natural communities is in Attachment A (Figure A-3). A cumulative list of plant and wildlife species observed in the BSA is in Attachment C.

The BSA contains Rescue clay and Rescue sandy loam soils (Natural Resources Conservation Service [NRCS] 1974).

There are no CNDDDB records of special-status wildlife in the BSA (CDFW 2023). Table 1 includes a summary of the special-status species identified as having potential habitat in the BSA. None of these species were observed in the BSA during the surveys.

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**Table 1. Special-Status Wildlife with Potential to Occur**

Scientific Name	Common Name	Federal Status <sup>a</sup>	State / CDFW Status <sup>a,b</sup>	Habitat Present?	Rationale and Survey Results	Potential to be Impacted by the Project
<b>Invertebrates</b>						
<b>Crustaceans</b>						
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	T	-- / --	No	The BSA does not contain suitable vernal pool habitat to support this species.	No
<b>Insects</b>						
<i>Bombus occidentalis</i>	western bumble bee	--	C / --	No	This species is believed to be locally extirpated from northern/central California and is restricted to higher elevations. The BSA lies below the elevation at which this species is known to still occur and is dominated by nonnative vegetation. No bumble bees were observed during the biological survey.	No
<i>Danaus plexippus plexippus</i> (pop. 1)	monarch butterfly (California overwintering population)	C	-- / --	Yes	A few narrow-leaved milkweed host plants occur but no potential overwintering sites and no individuals were observed. There are no CNDDDB records of this species within 5 miles of the BSA. No monarch butterflies were observed during the biological survey.	No
<i>Desmocerius californicus dimorphus</i>	valley elderberry longhorn beetle	T	-- / --	No	The BSA does not contain any elderberry shrubs to support this species.	No
<b>Vertebrates</b>						
<b>Amphibians</b>						
<i>Rana boylei</i> (pop. 5)	foothill yellow-legged frog (South Sierra Distinct Population Segment [DPS])	P	E	No	The BSA does not contain suitable aquatic habitat. The creek located north of the project area is typically dry, is separated from the BSA by development, and does not provide habitat. The nearest CNDDDB record of this species is located approximately 3.8 miles northeast of the BSA. No amphibians were observed during the biological survey.	No

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Scientific Name	Common Name	Federal Status <sup>a</sup>	State / CDFW Status <sup>a,b</sup>	Habitat Present?	Rationale and Survey Results	Potential to be Impacted by the Project
<i>Rana draytonii</i>	California red-legged frog	--	T / SSC	No	The BSA does not contain suitable aquatic habitat to support this species. The creek located north of the project area is typically dry, is separated from the BSA by development, and does not provide habitat. The nearest CNDDB record of this species is located approximately 7.5 miles southeast of the BSA. No amphibians were observed during the biological survey.	No
<i>Spea hammondi</i>	western spadefoot	--	-- / SSC	No	The BSA does not contain suitable seasonal waterbodies to provide suitable breeding habitat for this species. The creek located north of the project area is typically dry, is separated from the BSA by development, and does not provide habitat. The nearest CNDDB record of this species is located approximately 9 miles northeast of the BSA. No amphibians were observed during the biological survey.	No
<b>Birds</b>						
<i>Accipiter gentilis</i>	northern goshawk	--	-- / SSC	No	The BSA does not contain suitable conifer forest habitat to support this species. No northern goshawks were observed during the biological survey.	No
<i>Agelaius tricolor</i>	tricolored blackbird	--	T / SSC	Yes	The BSA and its immediate vicinity does not contain suitable open water or marsh habitat, however shrub thickets present on-site may provide suitable nesting habitat. The nearest CNDDB record of this species is located approximately 2.5 miles west of the BSA. No tricolored blackbirds were observed during the biological survey.	Impacts could occur with low likelihood. Preconstruction surveys and avoidance is recommended.
<i>Ammodramus savannarum</i>	grasshopper sparrow	--	-- / SSC	Yes	The BSA contains suitable grassland habitat to support this species; however previous disturbance and dominance of nonnative vegetation reduces habitat suitability. There are no CNDDB records of this species within 5 miles of the BSA. No grasshopper sparrows were observed during the biological survey.	Impacts could occur with low likelihood. Preconstruction surveys and active nest avoidance is recommended. This applies for all protected migratory birds and raptors.

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Scientific Name	Common Name	Federal Status <sup>a</sup>	State / CDFW Status <sup>a,b</sup>	Habitat Present?	Rationale and Survey Results	Potential to be Impacted by the Project
<i>Aquila chrysaetos</i>	golden eagle	--	-- / FP	No	The BSA does not contain suitable nesting habitat for this species; however, eagles may fly over site while foraging. No golden eagles were observed during the biological survey.	No
<i>Athene cunicularia</i>	burrowing owl	--	-- / SSC	Yes	The BSA contains suitable foraging habitat. Small mammal burrows potentially suitable for burrowing owl (with entrances 3-4+ inches wide) were observed during the biological survey. The BSA is within the winter (non-breeding) range of this species. The nearest CNDDB record is located approximately 7 miles west of the BSA. There are no occurrences of this species in El Dorado County. No burrowing owls were observed during the biological survey.	Impacts could occur with low likelihood. Only non-breeding individuals could occur, and none currently occupy the project site. Preconstruction surveys, avoidance of occupied burrows, and implementation of CDFW guidance is recommended.
<i>Buteo swainsoni</i>	Swainson's hawk	--	T / SSC	Yes	The BSA contains suitable foraging habitat and suitable large nesting trees; however, the BSA is located just outside the summer (breeding) range of this species. The nearest CNDDB record is located approximately 8.7 miles southwest of the BSA. No Swainson's hawks were observed during the biological survey.	Impacts could occur with low likelihood. Preconstruction surveys and active nest avoidance in accordance with the Swainson's Hawk Technical Advisory Committee survey protocol is recommended.
<i>Elanus leucurus</i>	white-tailed kite	--	-- / FP	Yes	The BSA does contain suitable foraging habitat and suitable large nesting trees. The nearest CNDDB record of this species is located approximately 8 miles northeast of the BSA. No white-tailed kites were observed during the biological survey.	Impacts could occur with low likelihood. Preconstruction surveys and active nest avoidance is recommended.
<i>Haliaeetus leucocephalus</i>	bald eagle	D	E / FP	No	The BSA does not contain suitable nesting habitat for this species; however, eagles may fly over site while foraging. No bald eagles were observed during the biological survey.	No
<i>Laterallus jamaicensis coturniculus</i>	California black rail	--	T / FP	No	The BSA does not contain suitable marsh/wetland habitat for this species. No California black rails were observed during the biological survey.	No

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Scientific Name	Common Name	Federal Status <sup>a</sup>	State / CDFW Status <sup>a,b</sup>	Habitat Present?	Rationale and Survey Results	Potential to be Impacted by the Project
<i>Riparia riparia</i>	bank swallow	--	T / --	No	The BSA does not contain suitable steep cliff/riverbank habitat to support this species. No bank swallows were observed during the biological survey.	No
<b>Fish</b>						
<i>Oncorhynchus mykiss irideus</i> pop. 11	steelhead - Central Valley DPS	T	-- / --	No	The BSA does not contain suitable aquatic habitat to support steelhead.	No
<b>Mammals</b>						
<i>Antrozous pallidus</i>	pallid bat	--	-- / SSC	No	The BSA contains suitable foraging habitat but lacks suitable roosting habitat such as caves/mines, cliff overhangs, rock crevices, tree cavities, and buildings. There are no CNDDDB records of this species within 5 miles of the BSA.	No
<i>Pekania pennanti</i>	fisher	--	-- / SSC	No	The BSA does not contain suitable mature, dense conifer forest habitat to support this species.	No
<b>Reptiles</b>						
<i>Emys marmorata</i>	western pond turtle	--	-- / SSC	No	The BSA does not contain suitable aquatic habitat to support this species. The creek located north of the project area is typically dry, is separated from the BSA by development, and does not provide habitat. The two nearest CNDDDB records of this species are located approximately 4.8 miles northeast and southwest of the BSA, respectively.	No
<i>Phrynosoma blainvillii</i>	coast horned lizard	--	-- / SSC	Yes	The mixed oak woodland contains adequate shrub cover and insects to forage upon. There are four CNDDDB record of this species within 5 miles of the BSA, with the nearest record located approximately 0.6 mile north of the BSA; however, all nearby occurrences are located north of State Route 50. No coast horned lizards were observed during the biological survey.	Impacts could occur with low likelihood. Preconstruction surveys and avoidance or relocation are recommended.

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Scientific Name	Common Name	Federal Status <sup>a</sup>	State / CDFW Status <sup>a,b</sup>	Habitat Present?	Rationale and Survey Results	Potential to be Impacted by the Project
<i>Thamnophis gigas</i>	giant garter snake	T	T / --	No	The BSA does not contain suitable aquatic habitat to support this species. The creek located north of the project area is typically dry and does not provide habitat. The BSA is located outside the known range of this species.	No

Note: Sources for species included in table include: USFWS (2023) letter; CNDDDB query (CDFW 2023a); CWHR (CDFW 2023b); and eBird (2023).

<sup>a</sup> Listing Status: E = Endangered; T = Threatened; P = Proposed; C = Candidate; CH = Critical habitat designated; D = Delisted.

<sup>b</sup> Other Codes: SSC = CDFW Species of Special Concern; FP = CDFW Fully Protected.



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**DISCUSSION**

No special-status plants or wildlife were found during the June 6, 2023, biological field survey. Site conditions in June 2023 were similar to those observed during the 2015, 2019, and January 2023 surveys. No special-status plants or wildlife are known or expected to occur in the BSA. The BSA may provide suitable habitat for nesting birds protected under the Migratory Bird Treaty Act (MBTA), including special-status birds such as grasshopper sparrow (*Ammodramus savannarum*), burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), and white-tailed kite (*Elanus leucurus*). The BSA may provide suitable habitat for coast horned lizard (*Phrynosoma blainvillii*). Additionally, the BSA is not located within a known terrestrial wildlife migration corridor. The BSA is surrounded by existing commercial and rural residence development to the north, south, and west, which serve as barriers to wildlife movement. The potential for special-status species to occur within the BSA is low due to the history of disturbance and surrounding land use and development, which limit habitat suitability and the ability of many species to disperse to the project site.

With the implementation of standard preconstruction surveys for nesting birds and reptiles and the avoidance of active bird nests, the project is not anticipated to result in potentially significant impacts to special-status wildlife.

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**LITERATURE CITED**

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- SWCA Environmental Consultants (SWCA). 2023. *Botanical Resources Technical Memorandum for the DR22-0009 Granade Business Properties (8) Offices/Warehouses Project, El Dorado County, California / SWCA Project No. 78621*. Prepared for Doug Granade. Sacramento, California. January 11.
- U.S. Fish and Wildlife Service (USFWS). 2023. Unofficial species list for the DR22-0009 Granade Business Properties (8) Offices/Warehouses Project. Information for Planning and Conservation (IPaC). Sacramento, California: Sacramento Fish and Wildlife Office. Available at: <http://ecos.fws.gov/ipac/>. Accessed June 2023.

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**ATTACHMENT A**

**Figures**

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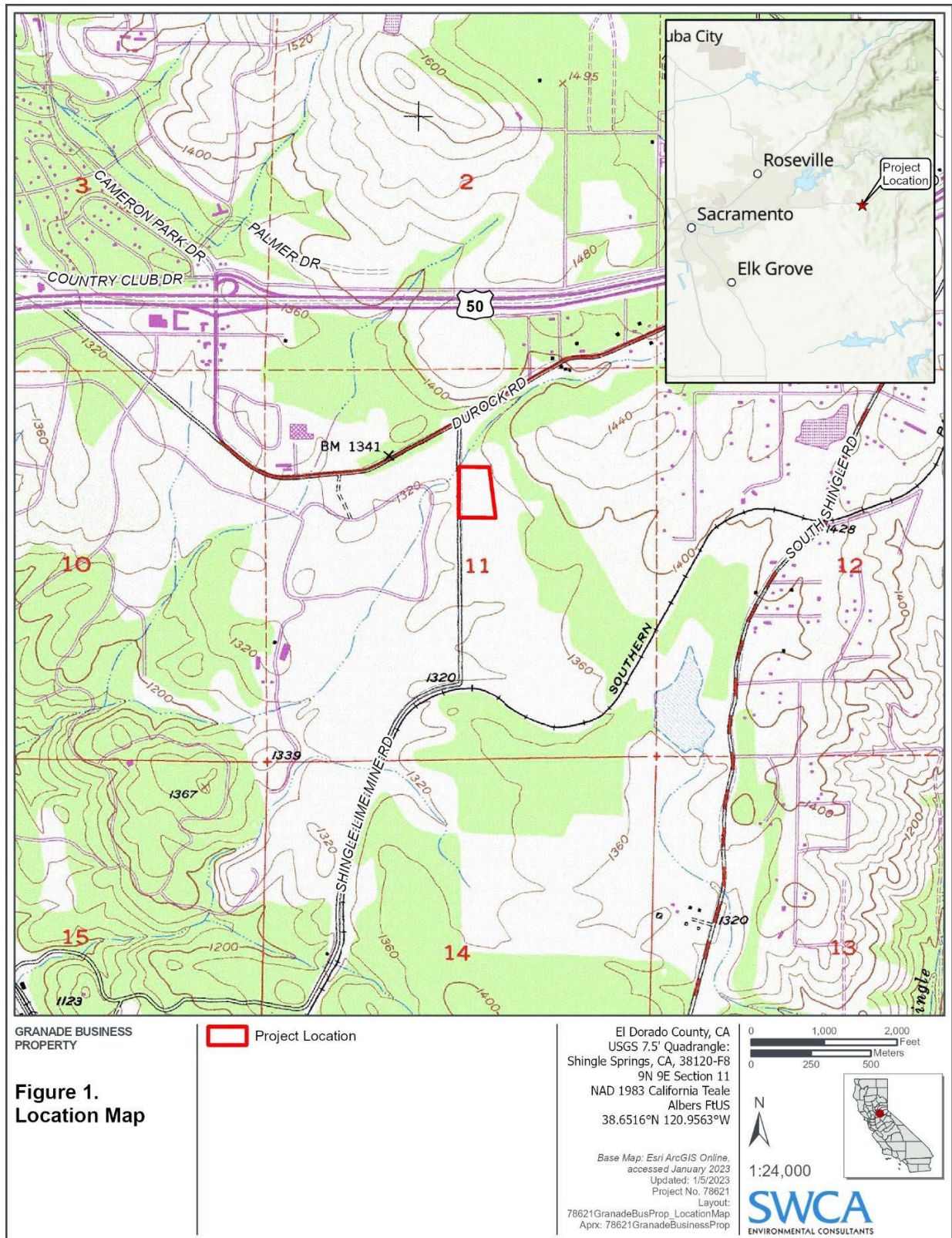


Figure A-1. Project Location Map.



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Figure A-2. Aerial Photograph.



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**Figure A-3. Botanical Resources Map.**



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**ATTACHMENT B**

**USFWS and CNDDB Database Queries**

# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

## Location

El Dorado County, California



## Local office

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

 (916) 414-6713

Federal Building

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2800 Cottage Way, Room W-2605  
Sacramento, CA 95825-1846

NOT FOR CONSULTATION

# Endangered species

**This resource list is for informational purposes only and does not constitute an analysis of project level impacts.**

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species<sup>1</sup> and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

- 
1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

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2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

## Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> Wherever found There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. <a href="https://ecos.fws.gov/ecp/species/2891">https://ecos.fws.gov/ecp/species/2891</a>	Threatened
Foothill Yellow-legged Frog <i>Rana boylei</i> No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/5133">https://ecos.fws.gov/ecp/species/5133</a>	Proposed Endangered

## Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

## Flowering Plants

NAME	STATUS
El Dorado Bedstraw <i>Galium californicum</i> ssp. <i>sierrae</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/5209">https://ecos.fws.gov/ecp/species/5209</a>	Endangered
Layne's Butterweed <i>Senecio layneae</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/4062">https://ecos.fws.gov/ecp/species/4062</a>	Threatened

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Pine Hill Ceanothus *Ceanothus roderickii*

Endangered

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/3293>

Pine Hill Flannelbush *Fremontodendron californicum* ssp.

Endangered

decumbens

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/4818>

Stebbins' Morning-glory *Calystegia stebbinsii*

Endangered

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/3991>

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

## Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

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1. The [Migratory Birds Treaty Act](#) of 1918.

2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:



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- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds  
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds  
<https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
<b>Bald Eagle</b> <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Jan 1 to Aug 31
<b>Belding's Savannah Sparrow</b> <i>Passerculus sandwichensis beldingi</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/8">https://ecos.fws.gov/ecp/species/8</a>	Breeds Apr 1 to Aug 15
<b>Black Swift</b> <i>Cypseloides niger</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/8878">https://ecos.fws.gov/ecp/species/8878</a>	Breeds Jun 15 to Sep 10

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**Bullock's Oriole** *Icterus bullockii*

Breeds Mar 21 to Jul 25

This is a Bird of Conservation Concern (BCC) only in particular  
Bird Conservation Regions (BCRs) in the continental USA

**California Gull** *Larus californicus*

Breeds Mar 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its  
range in the continental USA and Alaska.

**California Thrasher** *Toxostoma redivivum*

Breeds Jan 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its  
range in the continental USA and Alaska.

**Cassin's Finch** *Carpodacus cassinii*

Breeds May 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its  
range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9462>

**Clark's Grebe** *Aechmophorus clarkii*

Breeds Jun 1 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its  
range in the continental USA and Alaska.

**Common Yellowthroat** *Geothlypis trichas sinuosa*

Breeds May 20 to Jul 31

This is a Bird of Conservation Concern (BCC) only in particular  
Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/2084>

**Golden Eagle** *Aquila chrysaetos*

Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area,  
but warrants attention because of the Eagle Act or for potential  
susceptibilities in offshore areas from certain types of  
development or activities.

<https://ecos.fws.gov/ecp/species/1680>

**Lawrence's Goldfinch** *Carduelis lawrencei*

Breeds Mar 20 to Sep 20

This is a Bird of Conservation Concern (BCC) throughout its  
range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9464>

**Nuttall's Woodpecker** *Picoides nuttallii*

Breeds Apr 1 to Jul 20

This is a Bird of Conservation Concern (BCC) only in particular  
Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/9410>

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<b>Oak Titmouse</b> <i>Baeolophus inornatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9656">https://ecos.fws.gov/ecp/species/9656</a>	Breeds Mar 15 to Jul 15
<b>Olive-sided Flycatcher</b> <i>Contopus cooperi</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/3914">https://ecos.fws.gov/ecp/species/3914</a>	Breeds May 20 to Aug 31
<b>Tricolored Blackbird</b> <i>Agelaius tricolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/3910">https://ecos.fws.gov/ecp/species/3910</a>	Breeds Mar 15 to Aug 10
<b>Western Grebe</b> <i>aechmophorus occidentalis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/6743">https://ecos.fws.gov/ecp/species/6743</a>	Breeds Jun 1 to Aug 31
<b>Wrentit</b> <i>Chamaea fasciata</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 10
<b>Yellow-billed Magpie</b> <i>Pica nuttalli</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9726">https://ecos.fws.gov/ecp/species/9726</a>	Breeds Apr 1 to Jul 31

## Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey



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effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

**Breeding Season (■)**

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

**Survey Effort (|)**

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

**No Data (—)**

A week is marked as having no data if there were no survey events for that week.

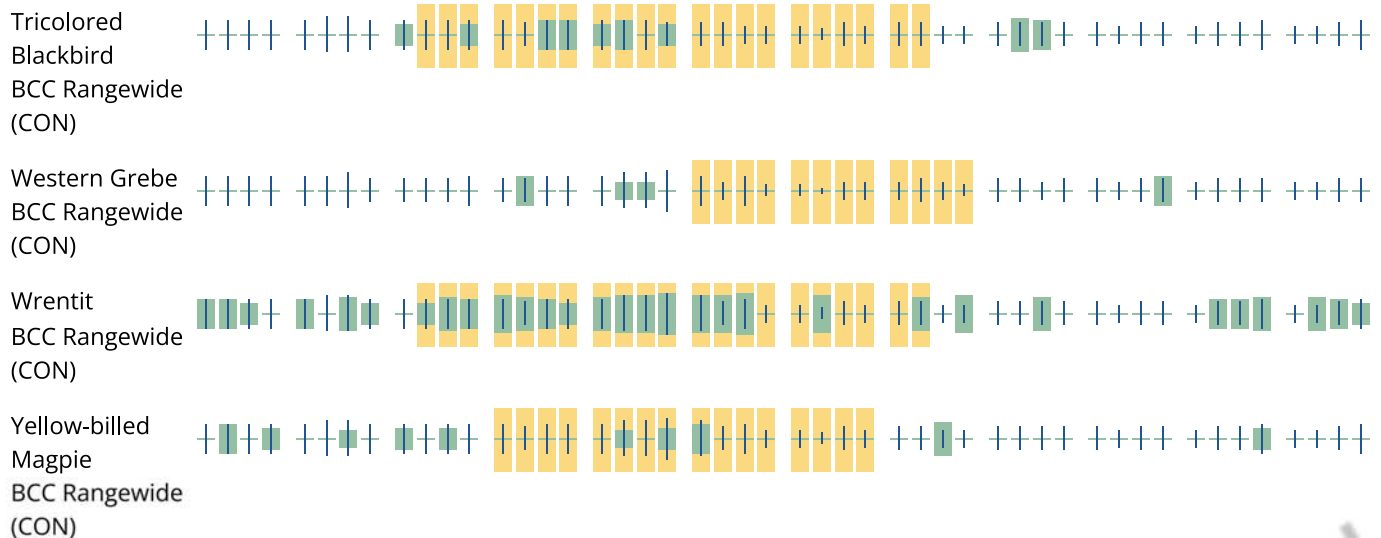
**Survey Timeframe**

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

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**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

**What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).



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Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

**How do I know if a bird is breeding, wintering or migrating in my area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

**What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

**Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

**What if I have eagles on my list?**

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

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### **Proper Interpretation and Use of Your Migratory Bird Report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

## Facilities

### National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

### Fish hatcheries

There are no fish hatcheries at this location.

## Wetlands in the National Wetlands Inventory

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(NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

This location did not intersect any wetlands mapped by NWI.

**NOTE:** This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

#### **Data limitations**

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

#### **Data exclusions**

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

#### **Data precautions**

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should

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seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

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**Selected Elements by Scientific Name**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



**Query Criteria:** Quad<span style="color:Red"> IS </span>(Latrobe (3812058)<span style="color:Red"> OR </span>Fiddletown (3812057)<span style="color:Red"> OR </span>Shingle Springs (3812068)<span style="color:Red"> OR </span>Garden Valley (3812077)<span style="color:Red"> OR </span>Coloma (3812078)<span style="color:Red"> OR </span>Placerville (3812067)<span style="color:Red"> OR </span>Folsom SE (3812151)<span style="color:Red"> OR </span>Clarksville (3812161)<span style="color:Red"> OR </span>Pilot Hill (3812171))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Accipiter gentilis</i></b> northern goshawk	ABNKC12060	None	None	G5	S3	SSC
<b><i>Agelaius tricolor</i></b> tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S2	SSC
<b><i>Allium jepsonii</i></b> Jepson's onion	PMLIL022V0	None	None	G2	S2	1B.2
<b><i>Ammodramus savannarum</i></b> grasshopper sparrow	ABPBXA0020	None	None	G5	S3	SSC
<b><i>Andrena blennospermatis</i></b> Blennosperma vernal pool andrenid bee	IIHYM35030	None	None	G2	S1	
<b><i>Antrozous pallidus</i></b> pallid bat	AMACC10010	None	None	G4	S3	SSC
<b><i>Aquila chrysaetos</i></b> golden eagle	ABNKC22010	None	None	G5	S3	FP
<b><i>Arctostaphylos nissenana</i></b> Nissenan manzanita	PDERI040V0	None	None	G1	S1	1B.2
<b><i>Ardea alba</i></b> great egret	ABNGA04040	None	None	G5	S4	
<b><i>Ardea herodias</i></b> great blue heron	ABNGA04010	None	None	G5	S4	
<b><i>Athene cunicularia</i></b> burrowing owl	ABNSB10010	None	None	G4	S3	SSC
<b><i>Atractelmis wawona</i></b> Wawona riffle beetle	IICOL58010	None	None	G3	S1S2	
<b><i>Balsamorhiza macrolepis</i></b> big-scale balsamroot	PDAST11061	None	None	G2	S2	1B.2
<b><i>Banksula californica</i></b> Alabaster Cave harvestman	ILARA14020	None	None	GH	SH	
<b><i>Bombus occidentalis</i></b> western bumble bee	IIHYM24252	None	Candidate Endangered	G3	S1	
<b><i>Branchinecta lynchi</i></b> vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
<b><i>Buteo regalis</i></b> ferruginous hawk	ABNKC19120	None	None	G4	S3S4	WL
<b><i>Buteo swainsoni</i></b> Swainson's hawk	ABNKC19070	None	Threatened	G5	S4	



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## Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Calystegia stebbinsii</i></b> Stebbins' morning-glory	PDCON040H0	Endangered	Endangered	G1	S1	1B.1
<b><i>Calystegia vanzuukiae</i></b> Van Zuuk's morning-glory	PDCON040Q0	None	None	G2Q	S2	1B.3
<b><i>Carex cyrtostachya</i></b> Sierra arching sedge	PMCYP03M00	None	None	G2	S2	1B.2
<b><i>Carex xerophila</i></b> chaparral sedge	PMCYP03M60	None	None	G2	S2	1B.2
<b><i>Ceanothus roderickii</i></b> Pine Hill ceanothus	PDRHA04190	Endangered	Rare	G1	S1	1B.1
<b>Central Valley Drainage Hardhead/Squawfish Stream</b> Central Valley Drainage Hardhead/Squawfish Stream	CARA2443CA	None	None	GNR	SNR	
<b><i>Chlorogalum grandiflorum</i></b> Red Hills soaproot	PMLIL0G020	None	None	G3	S3	1B.2
<b><i>Clarkia biloba ssp. brandegeeeae</i></b> Brandegee's clarkia	PDONA05053	None	None	G4G5T4	S4	4.2
<b><i>Cosumnoperla hypocrena</i></b> Cosumnes stripetail	IIPLE23020	None	None	G2	S2	
<b><i>Crocathemum suffrutescens</i></b> Bisbee Peak rush-rose	PDCIS020F0	None	None	G2?Q	S2?	3.2
<b><i>Desmocerus californicus dimorphus</i></b> valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T2T3	S3	
<b><i>Elanus leucurus</i></b> white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
<b><i>Emys marmorata</i></b> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<b><i>Erethizon dorsatum</i></b> North American porcupine	AMAFJ01010	None	None	G5	S3	
<b><i>Eryngium pinnatisectum</i></b> Tuolumne button-celery	PDAP10Z0P0	None	None	G2	S2	1B.2
<b><i>Fremontodendron decumbens</i></b> Pine Hill flannelbush	PDSTE03030	Endangered	Rare	G1	S1	1B.2
<b><i>Galium californicum ssp. sierrae</i></b> El Dorado bedstraw	PDRUB0N0E7	Endangered	Rare	G5T1	S1	1B.2
<b><i>Haliaeetus leucocephalus</i></b> bald eagle	ABNKC10010	Delisted	Endangered	G5	S3	FP
<b><i>Horkelia parryi</i></b> Parry's horkelia	PDROS0W0C0	None	None	G2	S2	1B.2
<b><i>Hydrochara rickseckeri</i></b> Ricksecker's water scavenger beetle	IICOL5V010	None	None	G2?	S2?	
<b><i>Lasionycteris noctivagans</i></b> silver-haired bat	AMACC02010	None	None	G3G4	S3S4	



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## Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Laterallus jamaicensis coturniculus</i></b> California black rail	ABNME03041	None	Threatened	G3T1	S2	FP
<b><i>Myotis yumanensis</i></b> Yuma myotis	AMACC01020	None	None	G5	S4	
<b><i>Oncorhynchus mykiss irideus pop. 11</i></b> steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	G5T2Q	S2	
<b><i>Packera layneae</i></b> Layne's ragwort	PDAST8H1V0	Threatened	Rare	G2	S2	1B.2
<b><i>Pekania pennanti</i></b> Fisher	AMAJF01020	None	None	G5	S2S3	SSC
<b><i>Phrynosoma blainvillii</i></b> coast horned lizard	ARACF12100	None	None	G4	S4	SSC
<b><i>Rana boylei pop. 5</i></b> foothill yellow-legged frog - south Sierra DPS	AAABH01055	Proposed Endangered	Endangered	G3T2	S2	
<b><i>Rana draytonii</i></b> California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
<b><i>Riparia riparia</i></b> bank swallow	ABPAU08010	None	Threatened	G5	S3	
<b><i>Sagittaria sanfordii</i></b> Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2
<b><i>Spea hammondi</i></b> western spadefoot	AAABF02020	None	None	G2G3	S3S4	SSC
<b><i>Thamnophis gigas</i></b> giant gartersnake	ARADB36150	Threatened	Threatened	G2	S2	
<b><i>Viburnum ellipticum</i></b> oval-leaved viburnum	PDCPR07080	None	None	G4G5	S3?	2B.3
<b><i>Wyethia reticulata</i></b> EI Dorado County mule ears	PDAST9X0D0	None	None	G2	S2	1B.2

Record Count: 53

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**ATTACHMENT C**

**Species Observed List (2023)**

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*DR22-0009 Granade Business Properties (8) Offices/Warehouses  
Biological Resources Technical Memorandum*

**Table C-1. Plant Species Observed**

Family	Scientific Name <sup>1</sup>	Common Name	N/I <sup>2</sup>	Cal-IPC <sup>3</sup>
Vascular Plants nomenclature follows "The Jepson Manual" and <a href="http://ucjeps.berkeley.edu/interchange.html">http://ucjeps.berkeley.edu/interchange.html</a>				
<b>Angiosperms (Dicots)</b>				
<b>Anacardiaceae</b> (Sumac Family)	<i>Toxicodendron diversilobum</i>	Western poison oak	N	
<b>Apiaceae</b> (Celery, Carrot and Parsley Family)	<i>Torilis arvensis</i>	Tall sock-destroyer	I	
<b>Apocynaceae</b> (Dogbane Family)	<i>Asclepias fascicularis</i>	Narrow-leaf milkweed	N	
<b>Asteraceae</b> (Sunflower Family)	<i>Agoseris grandiflora</i>	Giant dandelion	N	
	<i>Baccharis pilularis</i>	Coyote brush	I	
	<i>Carduus pycnocephalus</i> ssp. <i>pycnocephalus</i>	Italian thistle	I	Moderate
	<i>Centaurea solstitialis</i>	Yellow star thistle	I	High
	<i>Grindelia camporum</i>	Gumplant	N	
	<i>Holocarpha virgata</i>	Tarweed, tarplant	N	
	<i>Lactuca serriola</i>	Prickly lettuce	I	
	<i>Senecio vulgaris</i>	Common groundsel	I	
	<i>Sonchus asper</i> ssp. <i>asper</i>	Prickly sow thistle	I	
<b>Brassicaceae</b> (Mustard Family)	<i>Hirschfeldia incana</i>	Shortpod mustard	I	Moderate
<b>Convolvulaceae</b> (Morning Glory Family)	<i>Convolvulus arvensis</i>	Field bindweed	I	
<b>Fabaceae</b> (Pea Family)	<i>Acmispon americanus</i> var. <i>americanus</i>	Deervetch, deerweed	N	
	<i>Trifolium hirtum</i>	Rose clover	I	Limited
	<i>Vicia villosa</i> ssp. <i>villosa</i>	Hairy vetch, winter vetch	I	
<b>Fagaceae</b> (Beech, Chestnuts and Oak Family)	<i>Quercus douglasii</i>	Blue oak	N	
	<i>Quercus lobata</i>	Valley oak, roble	N	
	<i>Quercus wislizeni</i> var. <i>wislizeni</i>	Interior live oak	N	
<b>Geraniaceae</b> (Geranium Family)	<i>Erodium botrys</i>	Storksbill, filaree	I	
	<i>Erodium cicutarium</i>	Redstem filaree	I	Limited
<b>Hypericaceae</b> (St. John's Wort Family)	<i>Hypericum perforatum</i> ssp. <i>perforatum</i>	Klamathweed	I	Moderate
<b>Onagraceae</b> (Willowherb Family)	<i>Clarkia purpurea</i> ssp. <i>quadrivulnera</i>	Four-spot	N	
<b>Plantaginaceae</b> (Plantain Family)	<i>Plantago erecta</i>	California plantain	N	
	<i>Plantago lanceolata</i>	English plantain	I	Limited
<b>Polygonaceae</b> (Buckwheat Family)	<i>Rumex</i> sp.	Dock	--	

# DR22-0009 GRANADE BUSINESS PROPERTIES, LLC

## OFFICE/WAREHOUSE BUILDINGS

### ATTACHMENT 16 - BIOLOGICAL RESOURCES TECHNICAL MEMORANDUM

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Biological Resources Technical Memorandum

Family	Scientific Name <sup>1</sup>	Common Name	N/I <sup>2</sup>	Cal-IPC <sup>3</sup>
<b>Rosaceae</b> (Rose Family)	<i>Prunus cerasifera</i>	Cherry plum	I	Limited
	<i>Pyracantha angustifolia</i>	Narrowleaf firethorn	I	Limited
	<i>Rosa californica</i>	California rose	N	
	<i>Rubus armeniacus</i>	Himalayan blackberry	I	High
<b>Angiosperms (Monocots)</b>				
<b>Poaceae</b> (Grass Family)	<i>Aegilops triuncialis</i>	Barbed goat grass	I	High
	<i>Aira caryophyllea</i>	Silver hairgrass	I	
	<i>Avena fatua</i>	Wild oats	I	Moderate
	<i>Briza minor</i>	Little quaking grass	I	
	<i>Bromus diandrus</i>	Rip-gut brome	I	Moderate
	<i>Bromus hordeaceous</i>	Soft chess	I	Limited
	<i>Bromus rubens</i>	Red brome	I	High
	<i>Cynosurus echinatus</i>	Bristly dogtail grass	I	Moderate
	<i>Elymus caput-medusae</i>	Medusa head	I	High
	<i>Festuca perennis</i>	Italian rye grass	I	Moderate
	<i>Hordeum marinum</i>	Mediterranean barley	I	Moderate
	<i>Hordeum murinum</i>	Foxtail barely	I	Moderate
	<i>Phalaris aquatica</i>	Harding grass	I	Moderate
	<i>Triticum aestivum</i>	Common wheat	I	
<b>Themidaceae</b> (Brodiaea Family)	<i>Brodiaea elegans</i>	Harvest brodiaea	N	
	<i>Triteleia hyacinthina</i>	Fool's onion	N	
<b>Gymnosperms</b>				
<b>Pinaceae</b> (Pine Family)	<i>Pinus sabiniana</i>	Gray, ghost, or foothill pine	N	

<sup>1</sup> Taxonomy follows The Jepson Manual: Vascular plants of California, 2nd ed. (Baldwin et al. 2012).

<sup>2</sup> N = Native to CA; I = Introduced.

<sup>3</sup> California Invasive Plant Council (Cal-IPC) Ratings:

**High:** These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.

**Moderate:** These species have substantial and apparent-but generally not severe-ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.

**Limited:** These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

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Table C-2. Animal Species Observed

Family	Scientific Name	Common Name	Notes
<b>Birds</b>			
<b>Accipitridae</b> (Hawks, Eagles, and Allies)	<i>Buteo jamaicensis</i>	Red-tailed hawk	Flyover
<b>Cathartidae</b> (New World Vultures)	<i>Cathartes aura</i>	Turkey vulture	Flyover
<b>Charadriidae</b> (Plovers, Dotterels, and Lapwings)	<i>Charadrius vociferus</i>	Killdeer	Auditory detection
<b>Columbidae</b> (Doves and Pigeons)	<i>Columba livia</i>	Rock pigeon	Flyover
	<i>Zenaida macroura</i>	Mourning dove	Flyover
<b>Corvidae</b> (Jays, Crows, and Allies)	<i>Aphelocoma californica</i>	California scrub jay	Auditory detection, perched off-site
<b>Fringillidae</b> (Finches, Euphonias, and Allies)	<i>Haemorhous mexicanus</i>	House finch	Perched on-site
<b>Icteridae</b> (New World Blackbirds)	<i>Agelaius phoeniceus</i>	Red-winged blackbird	Auditory detection
<b>Mimidae</b> (Mockingbirds, Thrashers, and Allies)	<i>Mimus polyglottos</i>	Northern mockingbird	Auditory detection, perched off-site
<b>Paridae</b> (Tits, Chickadees, and Titmice)	<i>Baeolophus inornatus</i>	Oak titmouse	Auditory detection, perched off-site
<b>Passerellidae</b> (New World Sparrows)	<i>Melospiza crissalis</i>	California towhee	Perched on-site
	<i>Passer domesticus</i>	House sparrow	Perched on-site
<b>Picidae</b> (Woodpeckers)	<i>Melanerpes formicivorus</i>	Acorn woodpecker	Auditory detection, perched off-site
<b>Sittidae</b> (Nuthatches)	<i>Sitta carolinensis</i>	White-breasted nuthatch	Auditory detection
<b>Troglodytidae</b> (Wrens)	<i>Thryomanes bewickii</i>	Bewick's wren	Auditory detection, perched off-site
<b>Mammals</b>			
<b>Cervidae</b> (Deer)	<i>Odocoileus hemionus</i>	Mule deer	Observed in grove of oak trees east of the project site
<b>Reptiles</b>			
<b>Squamata</b> (Lizards, Snakes, and Worm Lizards)	<i>Sceloporus occidentalis</i>	Western fence lizard	
<b>Insects</b>			
<b>Hymenoptera</b> (Bees, Wasps, and Ants)	<i>Bombus californicus</i>	California bumblebee	Foraging on-site
<b>Lepidoptera</b> (Butterflies and Moths)	<i>Colias philodice</i>	Clouded sulphur butterfly	Fly-by
	<i>Papilio zelicaon</i>	Anise swallowtail butterfly	Fly-by
<b>Odonata</b> (Dragonflies and Damselflies)	<i>Macrodiplex baletata</i>	Marl pennant skimmer	Fly-by
<b>Orthoptera</b> (Grasshoppers, Locusts, and Crickets)	<i>Gryllus</i> spp.	Field cricket	Auditory detection
	<i>Schistocerca</i> spp.	Bird grasshopper	

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**ATTACHMENT D**

**Site Photographs**



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Biological Resources Technical Memorandum*

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**Photo D-1. View of California annual grassland habitat in foreground with mixed oak woodland habitat, facing north from along western boundary of BSA. Shingle Lime Mine Road runs along left side of photo. Photo taken June 6, 2023.**



**Photo D-2. View of California annual grassland habitat in foreground with mixed oak woodland habitat and developed lot in background, facing northeast from Shingle Lime Mine Road along western boundary of BSA. Photo taken June 6, 2023.**



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**Photo D-3. View of California annual grassland habitat in foreground with mixed oak woodland habitat in background, facing southwest from northwest corner of BSA. Photo taken June 6, 2023.**



**Photo D-4. View of disturbed habitat at southern end of BSA, facing west from southeast corner of BSA. Photo taken June 6, 2023.**

# Granade Business Properties

## Wildland Urban Interface Fire Protection Plan

Prepared for:

**Granade Family Trust**  
**Douglas G. Granade Trustee**  
**4755 Business Drive**  
**Shingle Springs, Ca 95682**  
**DR22-0009**


Prepared by:

**CDS Fire Prevention Planning**  
**William F. Draper, RPF 898**  
**4645 Meadowlark Way**  
**Placerville, CA 95667**

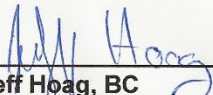
**June 19, 2023**

## Granade Business Properties

Approved by:

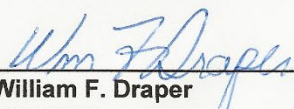
  
\_\_\_\_\_  
Braden Stirling  
Fire Marshal  
El Dorado County Fire Protection District

6/22/23  
Date

  
\_\_\_\_\_  
Jeff Hoag, BC  
California Department of Forestry  
and Fire Protection

6/22/23  
Date

Prepared by:

  
\_\_\_\_\_  
William F. Draper  
RPF # 898

6/22/23  
Date



# Granade Business Properties

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# **Granade Business Properties**

## **I. PURPOSE AND SCOPE**

Commercial and Industrial development is increasingly concerned about wildfire safety. Drought years coupled with flammable vegetation and annual periods of severe fire weather insure the potential for periodic wildfires.

The purpose of this plan is to assess the wildfire hazards and risks of the Granade Business Properties Project DR22-0009, to identify measures to reduce these hazards and risks and protect the native vegetation. There are light fuel hazards and gentle topography associated with this proposed project both on and adjacent to the project.

The possibility of any fires occurring when the Project is complete will be greatly reduced. However, small wildfires in the open space areas adjacent to this Project, and along roads may occur.

Incorporation of fire hazard reduction measures into the design and maintenance of this Project will reduce the size and intensity of wildfires and help prevent catastrophic fire losses. State and County regulations provide the basic guidelines and requirements for fire safe mitigation measures and defensible space around buildings. This plan builds on these basic rules and provides additional fire hazard reduction measures customized to the topography and vegetation of the development if any, with special emphases on the interface of buildings and wildland fuels.

The scope of the Granade Business Properties Project Wildland Urban Interface Fire Protection Plan recognizes the natural features of the area and designs wildfire safety measures which are meant to compliment and become part of the community design. The Plan contains measures for providing and maintaining defensible space around future buildings and open space. Plan implementation measures must be maintained to assure adequate wildfire protection.

Homeowners and/or Businesses who are adjacent to the wildfire environment must take primary responsibility along with the fire services for ensuring they have sufficient low ignitability and surrounding fuel reduction treatment. The fire services should become a community partner providing technical assistance as well as fire response. For this to succeed it must be shared and implemented equally by owners and the fire services.



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The economic impact on El Dorado County Fire Protection District (EDCFPD) should be minimal. The project shall eliminate a large grassy field. The new buildings will be constructed using up-to-date building materials to reduce the fire problem associated with new development. The fire load will not be as great as a residential development. The actual use of these buildings will determine what the increased exposures will be for the fire personnel. With preplanning by EDCFPD, their exposures will be known and emergency responses tailored to the situation.

## **II. FIRE PLAN LIMITATIONS**

The Wildland Urban Interface Fire Protection Plan for this development does not guarantee that wildfire will not threaten, damage, or destroy natural resources, homes, buildings or endanger the public. However, the full implementation of the mitigation measures will greatly reduce the exposure to potential loss from wildfire and provide defensible space for firefighters and residents as well as protect the native vegetation. Specific items are listed for owner's attention to aid in wildfire safety.

## **III. GRANADE BUSINESS PROPERTIES WILDLAND URBAN INTERFACE FIRE PROTECTION PLAN**

### **1. PROJECT DESCRIPTION**

Granade Business Properties Project is being proposed to construct 8 - 9,000 square foot Warehouse/Office buildings on 7.31 acres APN 109 240 032. The Project proposes to have a 26' wide driveway coming in from Business Drive that will provide access to all the buildings. At the north end of the buildings will be a fire department approved "T" turnaround. Currently, there are no improvements on the parcel. The project is located in the Shingle Springs Industrial Park. It is at the end of Business Drive and has Shingle Lime Mine Road along the project's western border.

All the buildings shall front the driveway with access to the rear of each of the 8 units. This access shall have lockable gates which will have a knox box as required by El Dorado County Fire Protection District. Perimeter fencing shall surround the majority of the project with the exclusion of the main driveway and "T" turnaround. The driveway

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and turnaround shall be asphalt paving capable of supporting a 75,000 lbs. vehicle. The surface behind each of the buildings shall be compacted gravel.

This parcel is zoned Industrial. It is flat to gently sloped as shown on the topographic maps (Appendix C) with grass and has a clump oak trees located in the northwest corner of the property. There are blue oaks, valley oaks and liveoaks. The project will need to comply with El Dorado County Oak Resources Conservation Ordinance. Emphasis should be placed on eliminating the liveoaks and retaining the blue and valley oaks. Liveoaks are a very flashy fire hazard tree.

This Project must comply with current fire safe standards in the El Dorado County Regional Fire Protection Standard as well as the following Authority.

- 2022 California Fire Code (CFC), Chapter 4, Chapter 4 (Emergency Planning & Preparedness).
- 2022 Local Fire District Ordinance, Chapter 49, Section 4903.1 (WUI Fire Protection Plans).
- 2021 Title 14 of the California Code of Regulations, Division 1.5, Chapter 7, Subchapter 2, Articles 1-5 (Fire Safe Regulations).
- 2022 California Building Code (CBC) Chapter 7A (Materials & Construction Methods for Exterior Wildfire Exposure)
- Fire Hazard Planning Technical Advisory Guide (2020) – Governor’s Office of Planning & Research

The El Dorado County Fire Protection District (EDCFPD) provides all fire and emergency medical services to this project. The California Department of Forestry and Fire Protection (CALFIRE) has wildland fire responsibility in this state responsibility area (SRA). The project is in a “High” Fire Hazard Severity Zone.

## **2. GOALS**

- A. Modify or eliminate the high hazard vegetation fuels.
- B. Reduce the size and intensity of wildfires.
- C. Ensure defensible space is provided around all structures.
- D. Design fuel treatments to minimize tree removal.
- E. Ensure fuel treatment measures are maintained.
- F. Identify fire safe structural features.
- G. Help owner protect the buildings from wildfire.

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### **3. WILDFIRE MITIGATION MEASURES**

Wildfire mitigation measures are designed to accomplish the Goals by providing and maintaining defensible space and treating high hazard fuel areas. Fire hazard severity is reduced through these mitigation measures. The Wildland Urban Interface Fire Protection Plan places emphasis on defensible space around structures. The 5' ember resistant zone shall be hardscaped. There will be limited landscaping which will be maintained.

The commercial buildings construction materials, fire hydrant location and fuel treatment will be extremely important in the development of this parcel. Building setbacks from the property line are to be a minimum of 20'. All the buildings that do not meet the minimum 30' setback requirement shall meet the same practical effects as outlined in Appendix B.

Fuel modification zones (FMZ) of at least 30' in width shall be installed along all road frontages. It is the responsibility of owner to comply with this annual requirement. A 10-foot fuel modification zone along both sides of all driveways is also required. The fuel treatment prescription and actual area to be treated is shown in Appendix A. These Fuel Modification Zones are to be treated annually by June 1 and maintained throughout the declared fire season. A 30' fuel modification zone is to be maintained around all buildings. Sidewalks and planted landscaping may be a part of this FMZ (See Appendix A). This is part of the required 100' defensible space. Building hardening is an important part in creating and maintaining defensible space. Any tree canopy over the driveways will have 15' of vertical clearance over the roadways. Nonflammable fencing shall be used.

All buildings shall be required to install and maintain an approved automatic fire sprinkler system that complies with the standards of California Code of Regulations Title 24, Part 2.5 and EDCFPD standards. The project is in a "High" Fire Hazard Severity Zone. Implementation of Wildland-Urban Interface Fire Areas Building Standards will be required for the construction of new buildings. These standards address roofing, venting, eave enclosure, windows, exterior doors, siding, and decking.

Clearance along the road and around structures is very important and necessary. Fire Safe specifications state that all trees in the fuel modification zones shall be thinned so the crowns are not touching. Branches on remaining trees shall be pruned up 8 feet as measured on the uphill side of the tree. Brush shall not be allowed to grow under the tree canopy. Grasses shall be kept mowed to a 2-inch stubble annually by June 1 within the zone (FHRZ). Any tree crown canopy over the

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driveways shall be pruned at least 15 feet up from the driveway surface. Vegetation must be kept back from the driveway edge at least 2'. All planted landscaping needs to avoid the use of highly flammable plants such as resinous trees and shrubs.

The Fire Access Lane shall be a minimum of 26' wide shall have a turnaround with 40' turning radius. Fire Access Lane shall be able to support 75,000 lbs. vehicle load.

This area is served by EID water and must comply with EID Standard Construction Specifications.

The State required Fire Safe clearances (PRC 4291) shall be implemented around all structures. The El Dorado County Code of Ordinances Chapter 8.09 (Vegetation Management and Defensible Space) also applies. Clearances may be required at the time of construction by the County.

El Dorado County Oak Tree Ordinance applies to the removal of any oak trees. The Owner is responsible for being in compliance with this ordinance. The ordinance does not prevent the pruning of any oak tree that interferes with fire safe maintenance.

**More restrictive standards may be applied by approving El Dorado County Authorities. Approval of this plan does not by itself guarantee approval of this project. All mitigating measures in this plan while integrated must also stand alone. If one measure is determined to be invalid, all other measures shall remain in effect. The Wildland Urban Interface Fire Protection Plan shall be amended to correct any changes if necessary.**

**Mitigation Measures:**

- **Fire Access Lane shall be 26 feet wide. Fire Access Lane shall comply with the Fire Code weight standards (75,000 lbs.)**
  - a. **Responsibility- builder/owner**
- **All buildings shall have Class A listed roof covering.**
  - a. **Responsibility- builder/owner**
- **The buildings shall be constructed with exterior wall sheathing that shall be rated noncombustible. Ember and fire-resistant vents shall be installed. See Appendix B**
  - a. **Responsibility-builder**

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- **Windows and glass doors of the structure shall have tempered glass and fire-resistant frames.**
  - a. **Responsibility-builder**
- **Gutters and downspouts shall be noncombustible.**
  - a. **Responsibility-builder**

**2. OTHER FIRE SAFE REQUIREMENTS**

- **Prior to construction builder is required to submit site and fire sprinkler system plans for review and approval to EDCFPD.**
- **30' fuel modification zone along the road frontage the parcel shall be installed and annually maintained by June 1 to the Fire Safe specifications. Sidewalks and landscaping is acceptable in the zone along the driveways. Tree canopy over the road and driveways shall be cleared up 15'.**
- **Fire hydrants shall be in compliance with the most recently adopted EDCFPD and EID Standards. A water supply shall be on site at the time of construction.**
- **The project shall meet all the Public Resource Codes 4290 as amended (the 2023 SRA Fire Safe Regulations- Article 2 Access, Article 3 Signing, Article 4 Water, Article 5 Fuels), County and Fire Department ordinances unless amended, revised or waived.**
- **The property owner is responsible for any future fire safe or building code changes adopted by the State or local authority.**
- **A 5' ember resistant zone shall be adjacent to the foundations of all the structures.**
- **All fencing shall be noncombustible.**
- **Gates shall have a Knox Box in compliance with EDCFPD.**
- **Gates shall be 2 feet wider than the driveway.**
- **The EDCFPD shall review the Wildland Fire Safe Plan every 5 years to determine if additional Fire Safe measures need to be implemented.**
- **An entity acceptable to EDCFPD shall be created for the purpose of the maintenance of the FMA's on an ongoing basis. The source of**

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**funding shall be identified and established prior to the recording of the final map.**



# Appendix

## APPENDIX A

### FUEL MODIFICATION ZONE TREATMENTS

**Green-** landscaped, irrigated and regularly maintained or cut to a 2" stubble annually by June 1.

**Red-**annually by June 1 treat all grasses within 30' of the edge of the road to a 2" stubble and maintained throughout the declared fire season, remove all brush, limb trees to 8' and maintain tree canopy separation.



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**APPENDIX B**



**INFORMATION BULLETIN**

**on**

**BUILDING SETBACK REQUIREMENTS FOR STRUCTURE DEFENSIBLE SPACE**

**Date Issued:** December 14, 2021

**Purpose:**

To assist developers, builders, homeowners and Community Risk Reduction Division (CRRD) staff members on the requirements and fire safety mitigation measures available when proposing the placement of new buildings in State Responsibility Areas (SRA) as described in California Code of Regulations Title 14, Section 1206.1 (CCRT14§1276.01). This fire safety regulation reads as follows:

**CCR T14 §1276.01 Setback for Structure Defensible Space**

*(a) All parcels shall provide a minimum thirty (30) foot setback for all buildings from all property lines and/or the center of the road.*

*(b) When a thirty (30) foot setback is not possible for practical reasons, which may include but are not limited to parcel dimension or size, topographic limitations, or other easements, the local jurisdiction shall provide for same practical effect.*

*(1) Same practical effect requirements shall reduce the likelihood of home-to-home ignition.*

*(2) Same practical effect options may include, but are not limited to, noncombustible block walls or fences; five (5) feet of noncombustible material horizontally around the structure; installing hardscape landscaping or reducing exposed windows on the side of the structure with a less than thirty (30) foot setback; or additional structure hardening such as those required in the California Building Code, California Code of Regulations Title 24, part 2, Chapter 7A.*

*(c) Structures constructed in the SRA are required to comply with the defensible space regulations in Title 14. Natural Resources Division 1.5. Department of Forestry and Fire Protection Chapter 7. Fire protection Subchapter 3. Fire Hazard.*



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**Same Practical Effect Requirements:**

Whenever a new building is proposed within the SRA lands found in El Dorado Hills, Latrobe and Rescue communities the project applicant shall comply with CCRT14§1276.01 and meet the requirements found in Table 1 below:

**Table 1: CCR T14§1276.01 Building Setback Requirements**

Requirement	Setback ≥ 30'	Setback of 20'-29'	Setback of 11'-19'	Setback <sup>1</sup> ≤10'
Five (5) feet of noncombustible material horizontally around the structure	NR	X	X	X
Accessory structures regardless of size prohibited	NR	X	X	X
Eaves boxed in (soffit-eave design) and protected with ignition-resistant or non-combustible materials	NR	NR	NR	X
Exterior windows, skylights and glazed doors on the side of the structure prohibited except for bedroom rescue windows	NR	NR	NR	X
Exterior walls shall be constructed with ignition resistant building materials such as stucco, fiber cement wall siding, fire retardant treated wood or other approved materials.	NR	X	X	X
Ember and flame-resistant vents (WUI vents) installed in accordance with ASTM 2886	NR	X	X	X
Decks and projections greater than 3' prohibited	NR	NR	X	X
Noncombustible block walls or fire-resistant fences	NR	NR	NR	X

X=Required


NR=No Requirement

**Notice and Disclosure Requirements:**

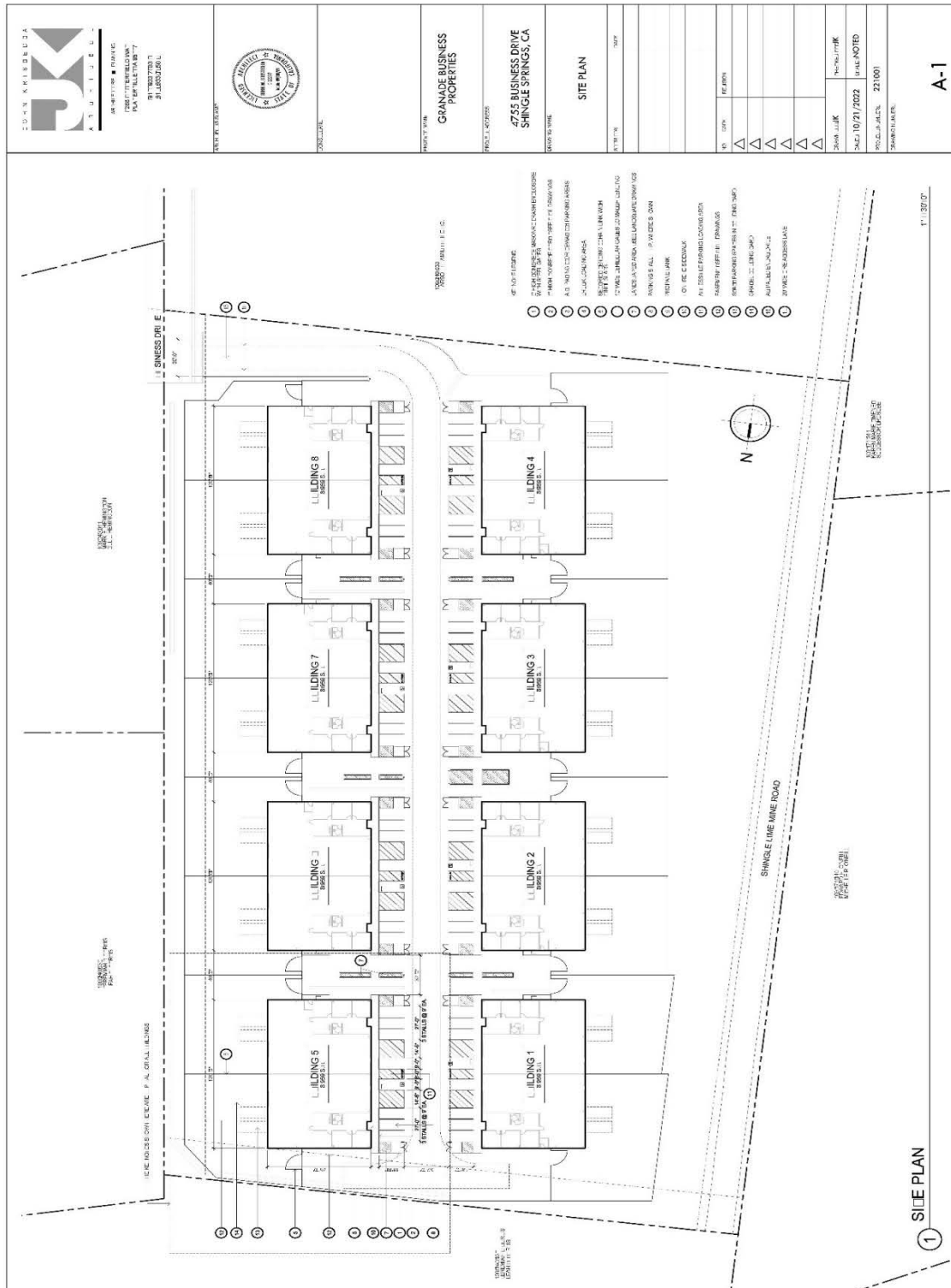
Projects seeking to construct a building in accordance with CCRT14§1276.01(b) shall file a notarized and recorded **Notice of Restriction (NOR)** with the El Dorado County Recorder's Office. All requirements identified in Table 1 shall be included within the NOR document. Once recorded you are then required to submit a copy of the recorded notice (including the document number that the County provides on the document) to our agency for our records. See the examples found on Pages 3-5 of this bulletin for additional details.

**You will not receive permit approval to construct the building without a NOR being recorded with the County of El Dorado and this information being provided to EDHFD.**

<sup>1</sup> One or more of these requirements can be substituted by a full-coverage fire sprinkler system on a case-by-case basis as determined by EDHFD.

<div>DESIGN REVIEW SUMMARY</div> <div>NEW BUILDINGS AND SITE DEVELOPMENT</div> <div>GRANADE BUSINESS PROPERTIES</div> <div>4755 BUSINESS DRIVE</div> <div>SHINGLE SPRINGS CA 95882</div>			<div><div>JOHN KRISTEDDA</div><div></div><div>ARCHITECT • PLANNING</div><div>1285 FORTYFIELD WAY</div><div>PLACERVILLE CA 95677</div><div>(916) 863-7783</div><div>911-863-2800</div></div> <div><div>SEAL</div><div>JOHN KRISTEDDA</div><div>ARCHITECT</div><div>STATE OF CALIFORNIA</div></div> <div>COUNTY</div> <div>PROPERTY NAME</div> <div>GRANADE BUSINESS PROPERTIES</div> <div>PROJECT ADDRESS</div> <div>4755 BUSINESS DRIVE SHINGLE SPRINGS, CA</div> <div>DESIGN NUMBER</div> <div>TITLE SHEET</div> <div>SHEET NO.</div> <div>DATE</div> <div>NO. DRAW. REVISION</div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div></div> <div>DRAWN BY JK</div> <div>CHECKED BY JK</div> <div>DATE: 02/18/2022</div> <div>SCALE: AS SHOWN</div> <div>PROJECT NUMBER: 210801</div> <div>DRAWING NUMBER:</div> <div>A-0</div>
PROJECT TEAM	PROJECT ADDRESS	DRAWING INDEX	
<div>APPROVING AGENCY</div> <div>EL DORADO COUNTY PLANNING DEPARTMENT</div> <div>2850 LAIRLANE BUILDING</div> <div>PLACERVILLE CA 95777</div> <div>OWNER</div> <div>D.G. GRANADE INC.</div> <div>4420 BUSINESS DRIVE</div> <div>SHINGLE SPRINGS CA 95882</div> <div>CONTRACTOR</div> <div>D.G. GRANADE INC.</div> <div>4420 BUSINESS DRIVE</div> <div>SHINGLE SPRINGS CA 95882</div> <div>ARCHITECT</div> <div>JOHN KRISTEDDA ARCHITECT</div> <div>1285 FORTYFIELD WAY</div> <div>PLACERVILLE CA 95677</div> <div>CIVIL ENGINEER</div> <div>WARREN CONSULTING ENGINEERS INC.</div> <div>1117 WINDYFIELD WAYS STE 110</div> <div>EL DORADO HILLS CA 95762</div> <div>ELECTRICAL ENGINEER</div> <div>PIETMAN ENGINEERING</div> <div>1050 OPPORTUNITY DRIVE</div> <div>ROSEVILLE CA 95778</div> <div>LANDSCAPE DESIGNER</div> <div>ADAMS LANDSCAPE DESIGN</div> <div>PO BOX 108</div> <div>PLACERVILLE CA 95677</div>	<div>APN 109,240,032</div> <div>4755 BUSINESS DRIVE</div> <div>SHINGLE SPRINGS CA 95882</div>	<div>ARCHITECTURAL</div> <div>A-0 TITLE SHEET</div> <div>A-1 SITE PLAN</div> <div>A-2.1 BUILDING ELEVATIONS</div> <div>A-2.2 BUILDING COLORS</div> <div>CIVIL</div> <div>2.1 GRADING PLAN</div> <div>2.2 GRADING PLAN</div> <div>3.1 TULIP PLAN</div> <div>ELECTRICAL</div> <div>E1.1 NOTES LEGEND AND ASSOCIATIONS</div> <div>E2.1 SITE PHOTOGRAPHIC EVIDENCE</div> <div>LANDSCAPE</div> <div>L1 PLANTING PLAN</div> <div>L2 IRRIGATION PLAN</div> <div>L3 WATER EFFICIENT LANDSCAPE WORKSHEET</div>	

## Granade Business Properties Layout





1 EXTERIOR ELEVATIONS

1" = 32' 0"

The grading plan shows a residential development with several building footprints and parking areas. The plan includes spot elevations and proposed grades. A match line is shown on the right side, indicating the plan continues on sheet C2.2.

**Grading Plan Details:**

- Building Footprints:** Several building footprints are shown with spot elevations and proposed grades. For example, one building has a spot elevation of 1322.40 and a proposed grade of 1322.40.
- Parking Areas:** Parking areas are shown with spot elevations and proposed grades. For example, one parking area has a spot elevation of 1322.40 and a proposed grade of 1322.40.
- Match Line:** A match line is shown on the right side of the plan, indicating the plan continues on sheet C2.2.

**GRAPHIC SCALE**  
1" = 20' (NOT TO SCALE)  
THIS DRAWING MAY HAVE BEEN REPRODUCED OR MODIFIED

**GRAPHING NOTES**  
1. GRADE INFORMATION TO MATCH AND/OR TRIM.

**PROJECT INFORMATION:**  
SHEET NO. C2.2  
DATE: 04-12-22  
DRAWN BY: [blank]  
CHECKED BY: [blank]  
SCALE: N/A  
AS NOTED  
MATERIAL SCALE: [blank]

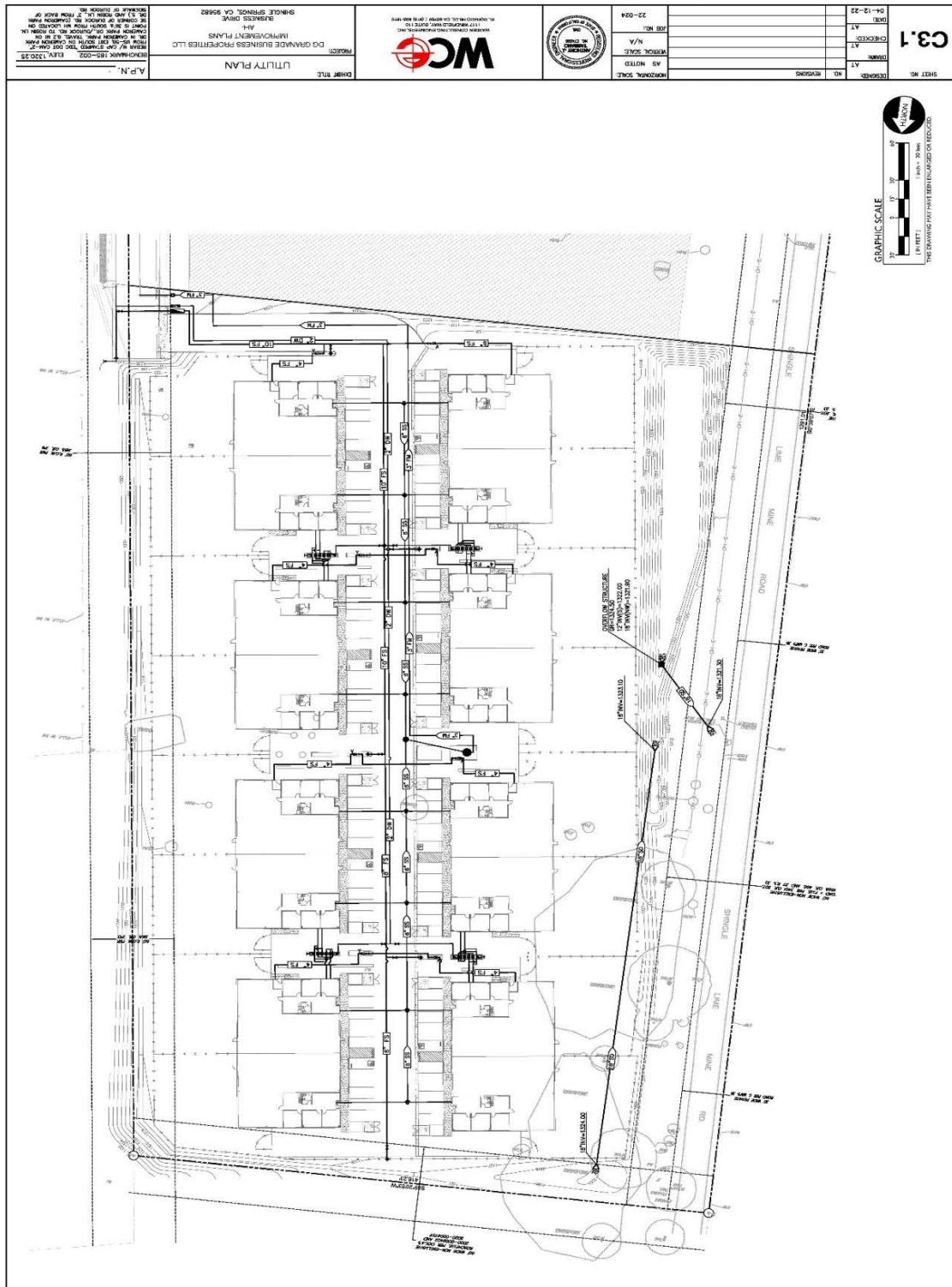
**COMPANY INFORMATION:**  
WCC  
WILSON CONSULTANTS  
11770 WILSON BLVD, SUITE 100  
LOS ANGELES, CA 90024  
TEL: (310) 555-1234  
WWW.WILSONCONSULTANTS.COM

**PROJECT INFORMATION:**  
PROJECT NO. [blank]  
SHEET NO. C2.2  
DATE: 04-12-22  
DRAWN BY: [blank]  
CHECKED BY: [blank]  
SCALE: N/A  
AS NOTED  
MATERIAL SCALE: [blank]

**PROJECT INFORMATION:**  
PROJECT NO. [blank]  
SHEET NO. C2.2  
DATE: 04-12-22  
DRAWN BY: [blank]  
CHECKED BY: [blank]  
SCALE: N/A  
AS NOTED  
MATERIAL SCALE: [blank]



**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 17 - WILDLAND URBAN INTERFACE FIRE PROTECTION PLAN**



## South Section



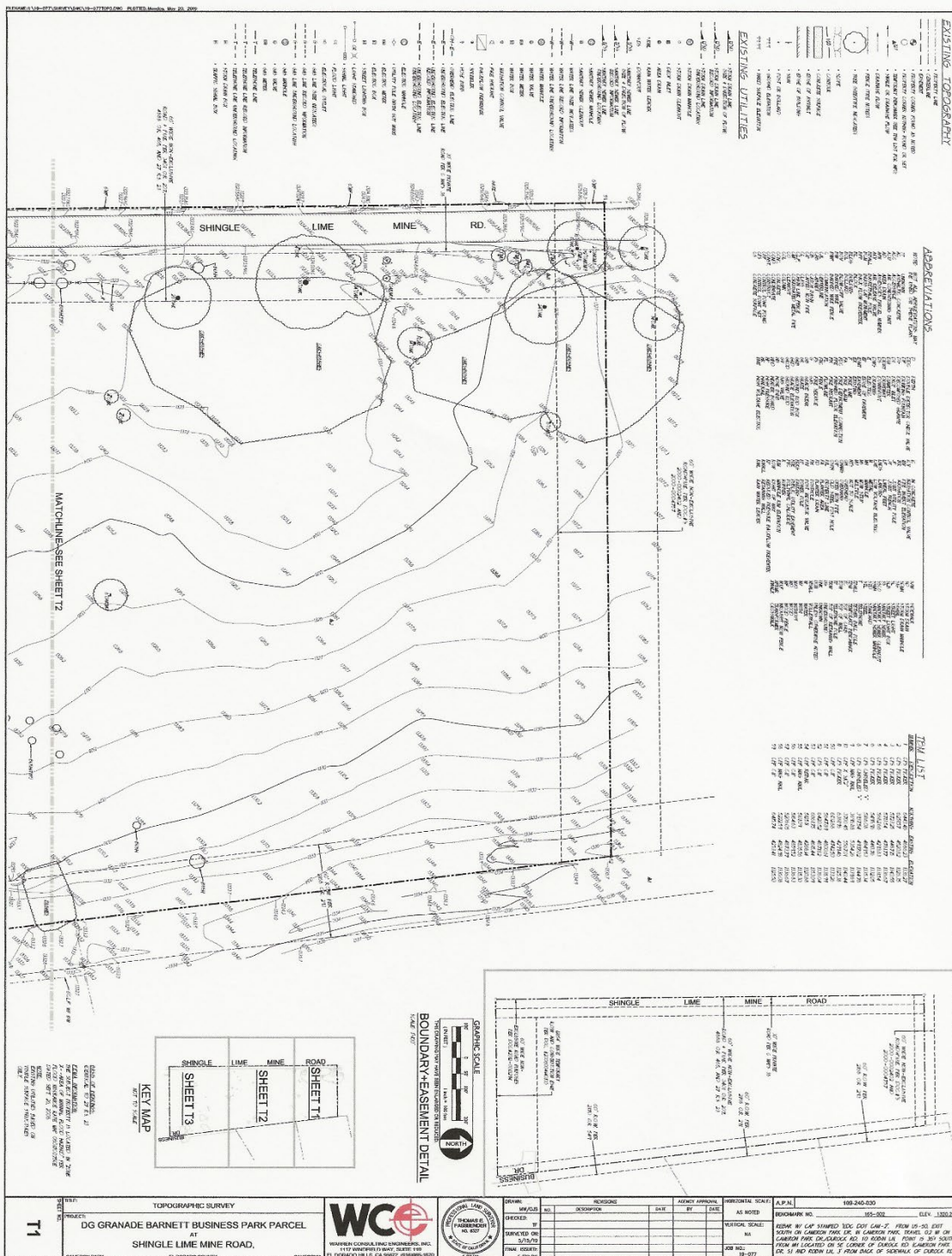


## Topo Mid Section





## Topo North Section





**DR22-0009 GRANADE BUSINESS PROPERTIES, LLC  
OFFICE/WAREHOUSE BUILDINGS  
ATTACHMENT 17 - WILDLAND URBAN INTERFACE FIRE PROTECTION PLAN**

**Parcel Map**

