4748 & 4810 CHILES ROAD
INITIAL STUDY AND NEGATIVE DECLARATION

PROJECT TITLE
Chiles Plaza

LEAD AGENCY NAME AND ADDRESS
City of Davis
23 Russell Boulevard, Davis, CA 95616

CONTACT PERSON AND PHONE NUMBER
Ike Njoku, Planner and Historical Resources Manager
City of Davis, Department of Community Development and Sustainability
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PROJECT SPONSOR'S NAME AND ADDRESS
Kurt Wagenknecht, K12 Architects, Inc.
3633 Seaport Boulevard, Suite C, West Sacramento, CA 95691

PURPOSE OF THE INITIAL STUDY
An Initial Study (IS) is a preliminary analysis, which is prepared to determine the relative environmental impacts associated with a proposed project. It is designed as a measuring mechanism to determine if a project will have a significant adverse effect on the environment, thereby triggering the need to prepare an Environmental Impact Report (EIR). It also functions as an evidentiary document containing information, which supports conclusions that the project will not have a significant environmental impact or that the impacts can be mitigated to a "Less Than Significant" or "No Impact" level. If there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, the lead agency shall prepare a Negative Declaration (ND). If the IS identifies potentially significant effects, but: (1) revisions in the project plans or proposals would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and (2) there is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment, then a Mitigated Negative Declaration (MND) shall be prepared.

This Initial Study has been prepared consistent with CEQA Guidelines Section 15063, to determine if the proposed project at 4748 and 4810 Chiles Road may have a significant effect upon the environment. Based upon the findings and mitigation measures contained within this report, no EIR will be prepared, but a mitigated negative declaration will be prepared.

PROJECT LOCATION AND SETTING

PROJECT LOCATION

The project site consists of two parcels, totaling approximately 1.78 acres, located at 4748 and 4810 Chiles Road. The project site can be identified by Yolo County Assessor's Parcel Numbers (APNs) 068-010-011 and 068-010-013.

Figure 1: Google Street View of Subject Site – 4748 & 4810 Chiles Road

EXISTING SITE USES

The project sites consisting of two parcels. Each parcel is currently developed as follows:

4748 Chiles Road with 991 sf Subway Restaurant Building and improvements.

4810 Chiles Road with the following:

- 3,506 sf Convenience Store Building; and
- Valero Gas Station that has the following:
  - 2,255 sf Auto Fuel Canopy;
  - 900 sf Cardlock Canopy;
  - 4 Multipurpose Auto Fuel Dispensers;
  - 2 Multipurpose Cardlock Dispensers; and
  - 3 Diesel Truck Dispensers.

SURROUNDING LAND USES

The surrounding land uses to the project site can be summarized as follows:

North Chiles Road, Taco Bell Restaurant, Cindy's Restaurant and Motel 6

South Vacant Auto Center parcel currently proposed to be developed with a carwash facility; El Macero Village Apartment; and Ellington Apartment Homes on the southeast

East Storage facility
West 7-11 Gas Station and convenience store

Figure 2: Google Aerial View of Subject Site – 4748 & 4810 Chiles Road

GENERAL PLAN AND ZONING DESIGNATIONS

General Plan

The General Plan (GP) Land Use designation of the subject site is General Commercial.

The General Plan states as follows regarding conditionally permitted uses in this land use category (yellow emphasis added):

> "Conditionally allowable uses include service stations, motels, restaurants, commercial recreation, limited convenience retail uses, public storage, moderate size community retail stores, warehouses and similar uses.
>
> Special Considerations for Moderate Size Community Retail Stores:
> a. Must be designed and located to maximize accessibility and safety for pedestrians.

b. Have a uniform design which is consistent with and complimentary to the City's small town ambience and neighborhood preservation goals.
c. Incorporate state-of-the-art energy conservation in its planning and design.
d. If located near a freeway, orient toward the community and away from the freeway.
e. Favor retail types that are not likely to be able to locate in the downtown and that are not currently adequately available in Davis (such as apparel and soft goods, appliances, home furnishings and electronics).
f. Shall be allowed only if:
   i. The downtown or neighborhood centers cannot accommodate the retail type, and
   ii. The retail type in question is not adequately available in Davis. Under this provision, the size and type (for example appliances, electronics) of the conditionally allowed retail use shall be strictly limited to the maximum size (up to 30,000 sq. ft.) and to the specific type(s) of retail use necessary to address the community's need(s).
g. The uses may not endanger the viability of similar retail uses in the City's primary and secondary retail zones (i.e. the downtown and existing neighborhood centers).
h. Retain the overall City goal of maintaining the economic vitality of the downtown and neighborhood centers, and assure, using economic studies, that any community-serving retail use is consistent with this goal.

Maximum Floor Area Ratio: 100 percent for public storage, warehouse, and other similar low intensity uses. 50 percent for all other uses."

Some applicable general plan policies include:

- Goal ED 3. Retain existing businesses and encourage new ones as means to increase higher paying jobs, create greater job diversification, and create a more balanced economy for all economic segments of the community, while also maintaining the City's fiscal and environmental integrity.
- Policy ED 3.1. Adopt policies that make Davis a more business-friendly community and eliminate unnecessary barrier to business.
- Policy ED 3.4. Continue to support the marketing efforts and expansion needs of the existing automobile dealers in the "Davis Auto Center".

South Davis Specific Plan

The subject site is designated Auto Center in the South Davis Specific Plan land use map.

Zoning Ordinance

The project site is zoned Auto Center (A-C). The proposed uses are conditionally permitted uses (CUP). The excerpt of uses conditionally permitted in the A-C district are as follows (yellow emphasis added):

40.16.040 Conditional uses.
The following conditional uses may be permitted in an A-C district:

(a) Inns and motor hotels, subject to provisions of Section 40.26.370;

(b) Retail shops for the sale of auto parts, accessories, souvenirs, curios, and other products primarily to serve the traveling public;

(c) Nurseries, greenhouses and fruit stands;

(d) Auto service stations;

(e) Restaurants;

(f) Used car lots;

(g) Laundromats;

(h) Public or semipublic, including public utility, uses intended primarily to meet the needs of the traveling public;

(i) Commercial recreation facilities, such as swimming pools, bowling alleys, skating rinks, and dance halls;

(j) Professional and administrative offices;

(k) Any other retail business or service establishment determined by the director to be of the same general character as the above permitted uses;

(l) Drive-through facilities, subject to the provisions of Section 40.26.420.

The proposed project requests the following uses:

- Restaurant
- Professional and administrative office
- Fueling station
- Convenience store
- Car wash

PROJECT DESCRIPTION

The applicant requests approval of entitlement applications to establish the following conditionally permitted uses at two parcels located at 4748 Chiles Road and 4810 Chiles Road (approximately 1.79-acre combined), which are also proposed to be merged:

1. Convenience Store, approximately 4,069 sf;
2. Office spaces – approximately 3,796 sf;
3. Restaurant – Subway, approximately1,100 sf ;
4. Drive-through car wash – approximately 1,586 sf; and
5. Fuel stations -- 5 multiple dispensers (MPDs) under approximately 2,750 sf canopy.

The applicant's stated purpose for the proposed project is to maximize and provide the properties the highest and best land use and economic advantages feasible.

Specifically, the entitlement applications are as follows:

1. Demolition #1-21, to demolish the existing Subway Restaurant building located at 4748 Chiles Road, and Convenience Store building, Auto Fuel and Cardlock canopies, and four multiple gasoline dispensers and two Cardlock multiple dispensers plus three Diesel Truck dispensers.

2. Lot Merger/Lot Line Adjustment #1-21, to combine into one lot the two parcels at 4748 and 4810 Chiles Road to accommodate the proposed conditionally permitted uses.

3. Conditional Use Permit #1-21, to allow the following proposed conditionally permitted uses:
    a. fueling station
    b. drive-through car wash
    c. a restaurant
    d. convenience store, and
    e. professional and administrative office.

    Further, pursuant to Section 40.26.420(f) (drive-through facilities) of the Zoning Ordinance, the applicant requests a waiver of the requirement that drive-through stacking lanes shall be a minimum of 100' from any residential lot. The applicant submitted noise report, which shows that the project will meet the city's noise standards, and recommends installation of a 6' high masonry wall along this property line. There will be a pathway cross walk passing the drive-through lane, and it is anticipated that cars will be moving at 5 miles per hour (MPH) at the pathway location. The pathway/crosswalk will be paved to enhance it and delineate it.

4. Design Review #2-21, to review and approve the site plan and architecture of the proposed project.

The anticipated hours of operation for each use will be as follows:

- Convenience Store: 24 hours, 7 days a week (i.e., 24/7); and
  Employees per shift three (3)
- Subway Restaurant: 7:00 am to 10:00 pm daily; and
  Employees per shift three (3)
- Offices: 7:00 am to 8:00 pm.; and
  Employees per shift 10

The total anticipated employees present within the Chiles Plaza complex at any given time is 16.

Further, the applicant states that the existing 6 MPDs for auto fueling will be reduced to 5 MPDs. The truck fueling will be eliminated entirely. The existing 991 sf Subway restaurant will be increased to 1,100 sf. The convenience store will be increased from 3,506 sf to 4,069 sf. There are no office spaces currently on the site, but the proposed project will add approximately 3,796 sf of office spaces. The project will be built in one Phase.

Architecture

The applicant states that the existing old barrel vault-type convenience store building at 4810 Chiles Road is outdated and needs replacement. This building's exterior has some stone, but is mostly cement plaster with no architectural detailing. The Subway building at 4748 Chiles Road, while relatively a new building, is cement plaster with no architectural features as well.

Two new single-story buildings are proposed with the project. The proposed convenience store building that also contains the car wash will feature a covered walkway along the front, with arched openings with architectural detailing. The entrance has a high tower with a brick veneer finish, which is made to look like it is 2 stories in height. The front corners of the building also have a small tower with stone veneer finish. The roof line has three distinct cornice details. There is a mansard roof with metal roofing in a walnut finish. All the colors are earth tone colors.

The car wash building is in the back of the building and is not visible from the central area of the site. The car wash is a roll-over type car wash that you find at many gas stations. It is unattended. There are no vacuums.

The proposed office and restaurant building will also feature the same brick and stone veneer. It is designed to look like a few smaller building, and also made to look like a 2-story building. The buildings will have wrought iron balconies with shutter-type faux doors and an awning. All of which are decorative.

Site Improvements

The easterly property line, which is shared with the storage facility has an existing 10' high wall that is a part of their building. The applicant does not propose to change anything on this side, but will maintain a 6' planter bay along this property line. The southerly property line has an existing chain link and wood fences, which will be replaced with a 7' high CMU wall. This is in the area of the car wash, and the 7' high masonry wall will comply with the attenuation measure called out in the Noise report prepared for this project. The portion that is next to the vacant property will not have a fence. No fence is proposed for this portion of the property. The western property line, which is along the 7-11 property has an existing chain link fence that belongs to 7-11, thus will remain.

The project will have 4-Electric Vehicle charging stations. Additional stations could be added in the future depending on demand.

The existing site only has landscaping around the perimeter. The new project will meet the City's landscape requirements, and parking lot shading standards as designed. There is room for outdoor dining at the Subway store on the west end of the building, but is not proposed.

There will be a 10-bike parking spaces, and additional 4 bike lockers. The site has 6 Clean Air Vehicle parking spaces. The parking lot area lights and fuel canopy lights will all have LED lights with a dimming feature when no cars are present.

Traffic

A traffic report has been submitted, which analyzed the traffic impacts of the proposed infill redevelopment project. The report findings and recommended roadway improvements to address and reduce any potential impacts to less than significant level are summarized as following:

- Install a raised median on Chiles Road east of Mace Boulevard.
- Install a two-way left-turn lane on Chiles Road east of Mace Boulevard.
- Install separate outbound left-turn and right-turn lanes and accompanying signage/pavement markings at the Chiles Road east project driveway.
- Modify the northbound channelized right-turn lane at the Mace Boulevard/Chiles Road intersection to reduce vehicle travel speeds.

Car wash Drive-Through

This is a roll-over type car wash that takes about 5 minutes for the wash. According to the applicant, most people do not want to wait more than 20-25 minutes, so the line does not usually get longer than 4-5 cars. There is 150 feet of stacking to the entrance to the car wash, which will accommodate approximately 7 cars using 22' length. There will be no speaker, but there will be a menu board to determine to display car wash prices.

A waiver of the requirement for drive aisle to be 100 feet of the residential site (apartment) to the south is being requested. With the exception of this waiver request, the applicant stated the will project comply with all other drive-through ordinance requirements.

As an orientation, from the car wash entrance drive, the neighboring residential lot, which is an apartment complex, has an 8' planter, 19' parking stall and 25' drive aisle, then another landscape area before the apartment building. The applicant wishes to make the point here that there will be minimal impact as a result of the car wash on the occupants of the apartment complex due to the car wash. Nonetheless, on the exit drive the apartment is much closer but there is a larger landscaped area.

Project Purpose

The applicant's purpose for the proposed project is to redevelop the site with maximum potential land uses in order to put the property to its best and highest land use potential.

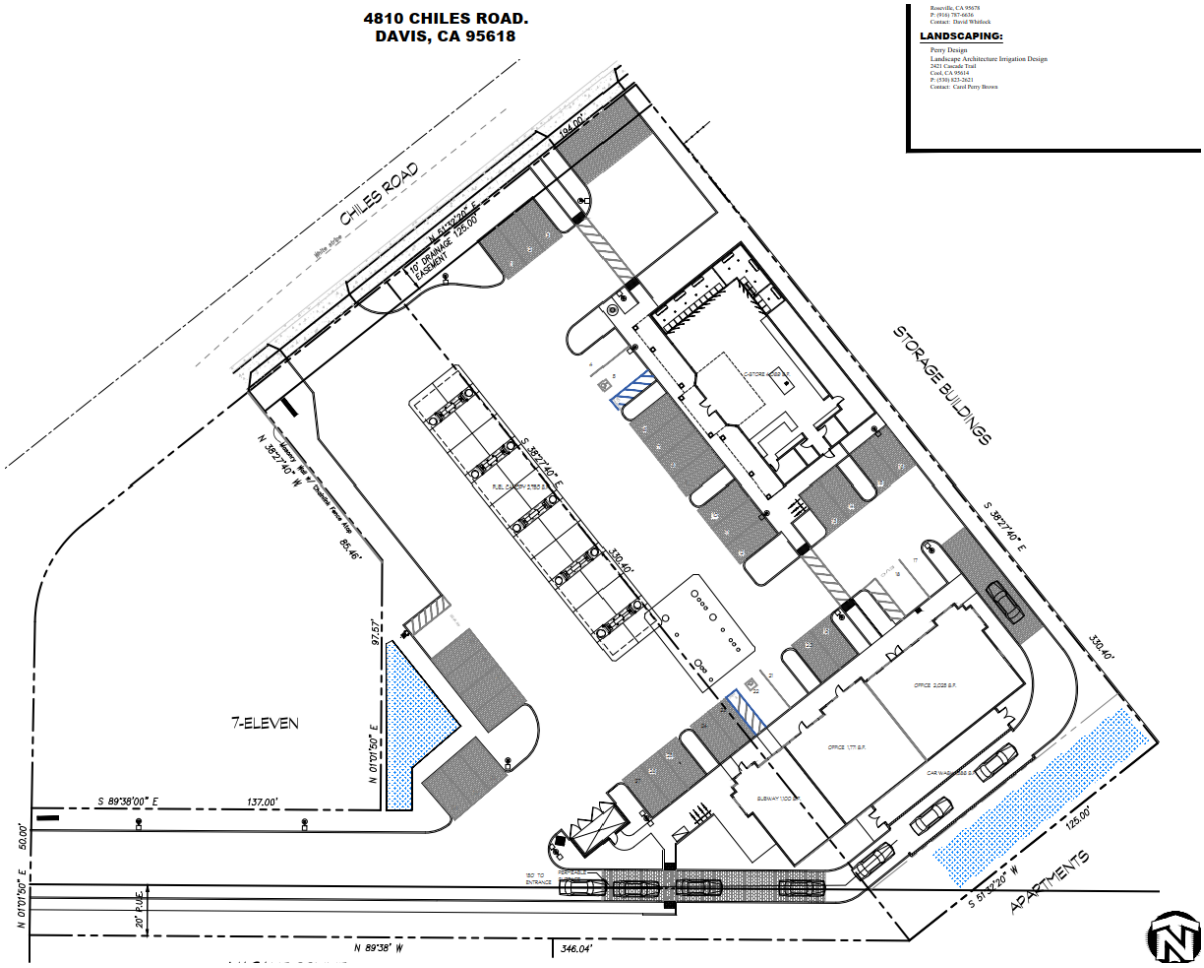


Figure 3: Proposed Project Site Plan

REQUESTED ENTITLEMENTS AND OTHER APPROVALS

The City of Davis is the Lead Agency for the proposed project, pursuant to the State Guidelines for Implementation of CEQA, Section 15050.

This document will be used by the City of Davis in consideration of the following actions:

1. Demolition
2. Lot Merger/Lot Line Adjustment
3. Conditional Use Permit
4. Design Review

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

Two of the environmental factors listed below would have potentially significant impacts as a result of development of this project, as described on the following pages.

	Aesthetics		Agriculture and Forestry Resources		Air Quality
	Biological Resources		Cultural Resources		Energy
	Geology and Soils		Greenhouse Gasses		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:

X	I find that the proposed project COULD NOT have a significant effect on the environment, and a MITGATED 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 on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	I find that although the proposed project could have a significant effect on the environment, because all 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.

Ike Njoku, Planner & Historical Resources Manager *June 2, 2022*

Signature/Title: Date:

EVALUATION INSTRUCTIONS

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4) "Negative Declaration: 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 (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).
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 Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9) The 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.

EVALUATION OF ENVIRONMENTAL IMPACTS

- In each area of potential impact listed in this section, there are one or more questions, which assess the degree of potential environmental effect. A response is provided to each question using one of the four impact evaluation criteria described below. A discussion of the response is also included.

- Potentially Significant Impact. This response is appropriate when there is substantial evidence that an effect is significant. If there are one or more "Potentially Significant Impact" entries, upon completion of the Initial Study, an EIR is required.
- Less than Significant With Mitigation Incorporated. This response applies when 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.
- Less than Significant Impact. A less than significant impact is one which is deemed to have little or no adverse effect on the environment. Mitigation measures are, therefore, not necessary, although they may be recommended to further reduce a minor impact.
- No Impact. These issues were either identified as having no impact on the environment, or they are not relevant to the project.

ENVIRONMENTAL CHECKLIST

This section of the Initial Study incorporates the most current Appendix "G" Environmental Checklist Form contained in the CEQA Guidelines. Impact questions and responses are included in both tabular and narrative formats for each of the 21 environmental topic areas.

I. AESTHETICS

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

Responses to Checklist Questions

General Plan EIR Significance Criteria

The thresholds of significance applied in the General Plan EIR are as follows:

- The General Plan was determined to have a significant impact on aesthetics if potential development proposed in the plan would substantially degrade the existing visual character or quality of the site and its surroundings (see Question c below).
- The General Plan was determined to have a significant impact if it would create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area (see Question d below).

Responses a), b): The City of Davis is located within the Sacramento Valley, approximately 15 miles west of Sacramento. The topography of the City is almost completely level, and natural raised vistas are not provided in the City's surroundings. The City is surrounded on all sides by agricultural parcels. The City of Davis, according to the City's General Plan EIR, has determined that the Planning Area of the General Plan does not contain officially designated scenic corridors, vistas, or viewing areas. Additionally, the City is not located within the vicinity of a State Scenic Highway.

A scenic vista is an area that is designated, signed, and accessible to the public for the express purposes of viewing and sightseeing. This includes any such areas designated by a federal, State, or local agency. Federal and State agencies have not designated any such locations within the City of Davis for viewing and sightseeing. Similarly, the City of Davis, according to the City of Davis General Plan Program EIR, has determined that the Planning Area of the General Plan has no officially designated scenic highways, corridors, vistas, or viewing areas.[1]

Thus, there are no nearby scenic resources that would be affected by redevelopment of the proposed project, including trees, rocks, outcroppings, and historic buildings. The city standard Tree Modification Permit would be required for any onsite trees' removal. Because the proposed project is an infill development within the City, the proposed project would not result in any new specific effects or effects that are greater than were already analyzed in the General Plan EIR. In addition, given that established scenic vistas or scenic resources are not located on or adjacent to the proposed project site, the proposed project would have ***no impact*** related to scenic vistas or scenic resources

Response c): Project implementation would result in the redevelopment of an improved parcels with more land uses than currently exist. The proposed land uses are conditionally allowed on the site, and are also similar to the existing land uses on the subject site. It is not anticipated that approval of intense conditionally permitted land uses would conflict with applicable zoning and other regulations governing scenic quality given that it has been established that the project is not located in or near scenic vistas or resources.

While development of the proposed project would change and alter the existing visual character of the project site, these changes would not degrade the visual quality of the site or the surrounding areas.

The City of Davis General Plan includes goals and policies designed to protect visual resources and promote quality design in urban areas. The proposed project must be developed to be consistent with the applicable policies and goals of the Davis General Plan.

Various temporary visual impacts could occur as a result of construction activities as the project develops, including grading, equipment and material storage, and staging. Though temporary, some of these impacts could last for several weeks or months during any single construction phase. The loss of existing landscaping and/or trees would also be a temporary impact until new landscaping matures. Because impacts would be temporary and viewer sensitivity in the majority of cases would be slight to moderate, significant impacts are not anticipated.

An Arborist report prepared by Tree Associates, John M. Lichter, dated October 24, 2021, for the proposed project indicates that there are seven (7) significant trees on the subject project sites; specifically, three Chinese pistache, three Aleppo pine and

[1] City of Davis. Draft Program EIR [pg. 5-2]. January 2000.

one Red box tree. The trees vary in sizes and ages. The largest trees were the Aleppo pines (18-28 inches trunk diameter) and the red box (multiple trunks of 21, 22, and 23 inches diameter). The trees are estimated to not be more than 35 years old. In addition, the report rated the overall condition of the trees between 20 and 75%, and the two Aleppo pines were rated 20 and 25% due to their poor structure and form. These two trees are recommended to be removed due to the poor structure and form. Further, the Arborist report has the following preliminary development impact assessment summary:

Summary of Preliminary Development Impact Assessment:

I recommended that two of the trees be removed for arboricultural reasons. The following is a summary of the development impacts to the five remaining ordinance-protected trees on site.

	# Trees/ % of total	Total Trunk Diameter Inches
Total number of on-site trees	7/100%	
Trees in poor condition recommended for removal by Arborist	2/28.5%	55
Trees to be removed due to site layout conflicts	2/28.5%	56
High Impact	3/43%	49

The six off-site trees were given moderate/high or severe impact ratings. If the recommendations concerning design modification are followed, the impact ratings for all on and off-site trees other than those to be removed due to site layout conflict would be low or low/moderate.

Once construction plans are prepared, the impact assessment should be updated. If there are changes to the location of infrastructure or there is additional disturbance and/or construction within the Tree Protection Zone (TPZ) or MTPZ (Modified TPZ – portion of TPZ without infrastructure), the prognoses for retained trees may need to be adjusted.

The Arborist report also provided trees' appraisal table and recommended trees' preservation guidelines for the project. The recommended project's conditions of approval include these appraisal and preservation guidelines consistent with the standards tree preservation and tree modification permit requirements.

Exhibit 3. **Appraisal Calculations**
4810 Chiles Road **Tree Associa**

Tree #	Species	Dia./Ht. (palms)	Area of Trunk (sq. in.)	Unit Cost of Nursery Tree ($83/sq. in.)	Basic Cost (area X unit cost)	Overall Condition Rating	Functional Limitation Rating	External Limitation Rating	Depreciated Cost	Appraised Value (rounded)
969	Chinese pistache (*Pistacia chinensis*)	18@2' adj 16	201	$ 83.00	$16,683.00	60%	65%	100%	$ 6,506.37	$ 6,500.00
970	Chinese pistache (*Pistacia chinensis*)	15	177	$ 83.00	$14,691.00	65%	65%	100%	$ 6,206.95	$ 6,200.00
971	Chinese pistache (*Pistacia chinensis*)	21@1' adj 18	254	$ 83.00	$21,082.00	75%	65%	100%	$10,277.48	$10,300.00
972	aleppo pine (*Pinus halepensis*)	29@2.5' adj. 27	572	$ 83.00	$47,476.00	25%	70%	100%	$ 8,308.30	$ 8,300.00
973	aleppo pine (*Pinus halepensis*)	28	615	$ 83.00	$51,045.00	65%	70%	100%	$23,225.48	$23,200.00
974	aleppo pine (*Pinus halepensis*)	28	615	$ 83.00	$51,045.00	20%	70%	100%	$ 7,146.30	$ 7,100.00
975	red box (*Eucalyptus polyanthemos*)	22,23, 21; adj. 30	707	$ 83.00	$58,681.00	50%	50%	100%	$14,670.25	$14,700.00

Tree Preservation Guidelines

The guidelines presented below should be followed for all trees to be preserved to ensure the least impact to the trees considering the existing plans.

- Tree preservation measures should be indicated on construction plans.
- Indicate surveyed trunk locations and tree protection zones (TPZ's) as described in attached table on all construction plans for trees to be preserved. Note, where infrastructure is located within protection zones, indicate modified tree protection zones (MTPZ's) and fencing as close to infrastructure as possible (minimize overbuild).
- Engage the Consulting Arborist to revise the development impact assessment as construction plans are prepared/revised.
- Conduct a meeting to discuss tree preservation guidelines with the Consulting Arborist and all contractors, subcontractors and project managers prior to the initiation of demolition and construction.
- Any pruning required for construction or recommended in this report should be performed by an ISA Certified Arborist or Tree Worker. Pruning for necessary clearance should be the minimum required for the project performed prior to demolition by an ISA Certified Arborist.
- Prior to any demolition activity, identify (tagged) trees to be preserved and install tree protection fencing as indicated on construction plans.
- Tree protection fences should be made of chain link. These fences are not to be removed or moved until construction is complete except under Arborist supervision. Avoid soil or above ground disturbances within the fenced area.
- Avoid grading, compaction, trenching, rototilling, vehicle traffic, material storage, spoil, waste or washout or any other disturbance within TPZ's/MTPZ's.
- Any work that is to occur within the protection zones of the trees should be monitored by the Consulting Arborist.
- Prior to trenching or grading within the protection zone of trees, carefully excavate, expose and mark roots >/= 2" diameter and preserve if possible or cut cleanly with a sharp saw under Arborist supervision.
- If roots >/= 2 inches or limbs larger than 3 inches in diameter are cut or damaged during construction, contact Consulting Arborist as soon as possible to inspect and recommend appropriate remedial treatments.
- All trees to be preserved should be irrigated once every week during non-Winter months to uniformly wet the soil to a depth of at least 18 inches under and beyond their canopies.

There were also nine windmill palm and one Canary Island date palm onsite. The windmill palms were 15 to 24 feet tall and located in a continuous strip planter. The Canary Island date palm was three feet tall and located in a circular bench/planter.

The General Plan EIR determined that development of infill sites generally surrounded by urban uses would not significantly degrade existing views. Because the proposed project is located on an infill site surrounded by urban uses, the proposed project would not result in a more significant impact than disclosed in the General Plan EIR. ***No impact*** can be identified.

Response d): The project site is currently developed with a convenience store, gas station, and restaurant. Existing lighting at the project site includes exterior building lighting, fueling island canopy lighting, interior building lighting, and street lighting.

There is a potential for the proposed project to create new sources of light and glare as new structures/buildings are proposed. It is anticipated that the amount of light and glare would likely be slightly higher than the existing condition.

The General Plan EIR considered whether infill development has the potential to increase daytime/nighttime light and glare. The General Plan EIR found that infill development would introduce additional sources of light and glare into areas that are primarily surrounded by lighted development (e.g., streetlights). Because infill development would not introduce land uses or structures that would contribute a substantial amount of new nuisance light or glare into an area that currently has minimal light or glare, the impact would be less than significant. As a project proposed on an existing developed infill site surrounded by urban uses, the proposed project will not result in a more significant impact than previously analyzed in the General Plan EIR.

The City of Davis maintains specific requirements related to the creation of new sources of light and glare. The proposed project would be required to comply with the uniformly applicable development policies in the form of the City's Outdoor Lighting Control policies within Article 8.17 of the City's Municipal Code. Consistency with the City's Municipal Code would be ensured via standard conditions of approval and during building permit plan process. Section 8.17.030 of the City's Municipal Code includes general requirements for outdoor lighting. For example, the Municipal Code requires all outdoor lighting to be fully shielded and the direction of lighting be considered to avoid light trespass and glare onto surrounding properties and roadways. Thus, implementation of the project would not have the potential to result in any new impacts related to degradation of the visual character of the site. The proposed project would not result in any new specific effects or effects that are more significant than what was previously analyzed in the General Plan EIR.

Conclusion. Adherence to the City's Municipal Code and compliance with the above identified preservation guidelines would result in a development that is cohesive, well-designed, and visually pleasing. Although project implementation would alter the existing visual character of the project site, this alteration would not substantially degrade the visual quality of the project site. Given the discussion herein, this is considered a ***less than significant*** impact.

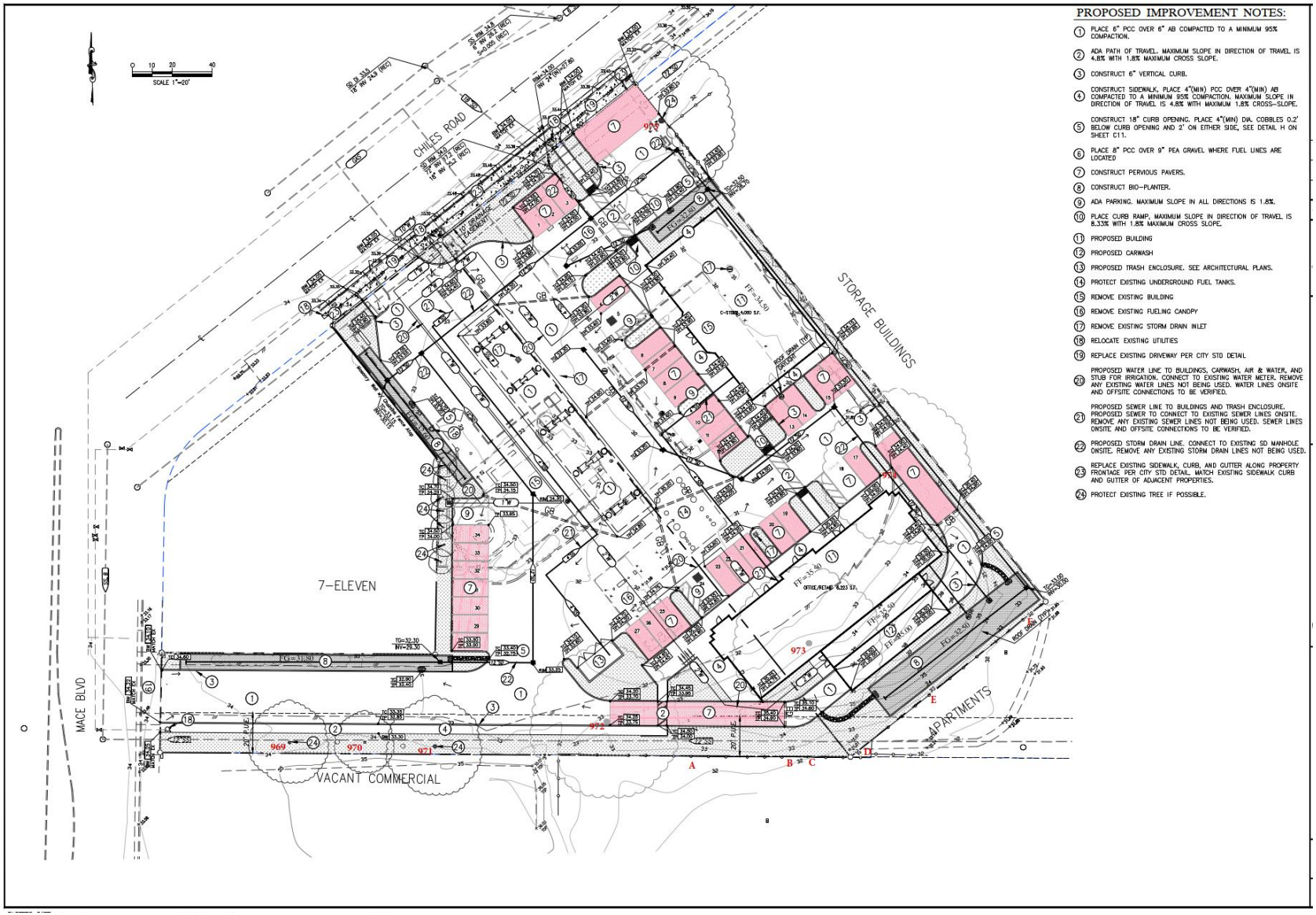


Figure 4: Trees Locational Exhibit

II. AGRICULTURE AND FORESTRY RESOURCES

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 1222(g)) or timberland (as defined in Public Resources Code section 4526)?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

Responses to Checklist Questions

General Plan EIR Significance Criteria

The thresholds of significance applied in the General Plan EIR are as follows:

- The General Plan was determined to have a significant impact on agricultural lands if it was determined to convert prime agricultural land (with potential use for viable farming), to nonagricultural uses (see Questions a-e below).

Responses a-e): The City of Davis General Plan EIR concluded that a significant impact on agricultural lands would occur if build out of the General Plan "would convert prime agricultural land (with potential use for viable farming), to nonagricultural uses."[2]

The proposed project site has been currently developed and had been developed many decades. It does not contain any farmland, and is not in proximity to existing farmland. In addition, the General Plan EIR considered the potential for development to convert agricultural land to urban use, and concluded that only development of the Covell Center site, unrelated to the project site, would result in a significant impact. Therefore, the conclusions within the General Plan EIR support the finding that development of the project site would not result in any impacts to agriculture. Due to the current developed nature of the site, the proposed redevelopment project would

2 City of Davis. *Draft Program EIR* [pg. 5A-31]. 2001.

not result in any more significant impacts related to conversion of farmland as compared to the impacts anticipated in the General Plan EIR.

The California Department of Conservation Important Farmland Finder designates the majority of land within the Davis City Limits as Urban and Built-Up Land. Additionally, according to the City's General Plan EIR, lands with active Williamson Act Contracts, and lands that meet the definition of a forestry resource, as defined by California Public Resources Code Section 12220(g), timberland (as defined by Public Resources Code Section 4526), or zoned Timberland Production (as defined by Government Code Section 51104[g]), do not exist within the City.

The project site is currently developed and has not been used as a Prime Farmland, Unique Farmland, or Farmland of Statewide Importance for many decades. The project site is not currently used for agricultural operations, and has not been used for agricultural operations in many decades. There are no agricultural operations or agriculturally zoned lands in the vicinity of the project site. The project has no potential to convert any off-site agricultural land, Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. Therefore, there is ***no impact***.

The project site is not zoned for agricultural use nor is it under a Williamson Act contract. The proposed project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. The project is located within urbanized area that had not been farmed in decades. It is not anticipated that the redevelopment of the subject site will result in any impact. Implementation of the proposed project would have ***no impact*** relative to agricultural use and/or Williamson Act contract.

IThe project site is not forestland (as defined in Public Resources Code section 1222(g)) or timberland (as defined in Public Resources Code section 4526). The proposed project would not conflict with existing zoning for, or cause rezoning of, forestland or timberland. Implementation of the proposed project would have ***no impact*** relative to this issue.

The project site is not forestland. The proposed project would not result in the loss of forestland or conversion of forestland to non-forest use. Implementation of the proposed project would have ***no impact*** relative to this issue.

III. AIR QUALITY

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*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?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

Existing Setting

The City of Davis is located within the Sacramento Valley Air Basin (SVAB) and under the jurisdiction of the Yolo-Solano Air Quality Management District (YSAQMD). The project site is located within the Yolo-Solano Air Quality Management District (YSAQMD). This agency is responsible for monitoring air pollution levels and ensuring compliance with federal and state air quality regulations within the Sacramento Valley Air Basin (SVAB) and has jurisdiction over most air quality matters within its borders. The federal Clean Air Act (CAA) and the California Clean Air Act (CCAA) require that federal and State ambient air quality standards (AAQS) be established, respectively, for six common air pollutants, known as criteria pollutants. The SVAB is designated nonattainment for the federal particulate matter 2.5 microns in diameter ($PM_{2.5}$) and the State particulate matter 10 microns in diameter (PM_{10}) standards, as well as for both the federal and State ozone standards.

No environmental factor of concern is identified that would relate to the proposed project.

General Plan EIR Significance Criteria

The thresholds of significance applied in the General Plan EIR are as follows:

- A significant impact would occur if a policy change in the General Plan update would result in a substantial adverse change in the environment related to air quality.
- The proposed land use map alternative was determined to have a significant impact if the alternative would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations.
- Under this [the General Plan EIR] analysis specific criteria developed by the YSAQMD were used in determining the significance of project-related air quality impacts. Project-related emissions were considered significant if

emissions exceeded the YSAQMD thresholds of:
  - 82 pounds per day (ppd) of ozone precursor, ROG,
  - 82 ppd of ozone precursor, NO_X, or
  - 82 ppd of PM_{10}.
- The proposed land use map alternative was determined to have a significant impact if the alternative would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation or expose sensitive receptors to substantial pollutant concentrations.

  Under this [the General Plan EIR] analysis specific criteria developed by the YSAQMD were used in determining the significance of project-related air quality impacts. Project-related emissions were considered significant if emissions exceeded the YSAQMD thresholds of:
  - 550 ppd of CO.

Additionally, a specific project was considered to have a significant impact if it would:

- Result in predicted carbon monoxide (CO) concentrations that exceed the state 1-hour standard of 220 parts per million (ppm) (or the federal 1-hour standard of 35 ppm) at any receptor that does not exceed this standard without the project,
- Result in predicted CO concentrations that exceed that state and federal 8-hour standard of 9 ppm at any receptor that does not exceed this standard without the project, or
- Increase CO concentrations at any receptor that already exceeds any of the above standards without the project.

Responses to Checklist Questions

Responses a-b): The General Plan EIR considered whether development under the General Plan would exceed YSAQMD thresholds and concluded that some development would result in significant and unavoidable construction and operational increases in PM_{10}, ROG, and NO_X. Although the General Plan EIR concluded that buildout of the General Plan would result in an impact related to CO emissions, the General Plan EIR further concluded that feasible mitigation to reduce the identified impact did not exist, and the General Plan EIR did not impose any mitigation measures for the impact related to CO emissions. It is not anticipated that the proposed project will violate any air quality standards or contribute substantially to an existing or projected air quality violation or result in a cumulatively considerable net increase in any criteria air pollutants as the uses proposed are allowable under the General Plan and Zoning land use designations, plus the subject site is already developed with majority of the proposed uses, excluding carwash and office space. It should be noted that the pump-islands is reduced by the proposed project. Therefore, it is not anticipated that the proposed project will result in project-specific effects or effects that are more significant than what was already analyzed in the General Plan EIR.

Operational Emissions

The proposed project would be a direct and indirect source of air pollution, in that it would generate and attract vehicle trips in the region (mobile source emissions), may require the use of grid energy (natural gas and electricity), and generate area source emissions. The mobile source emissions would be entirely from vehicles, while the area source emissions would be primarily from landscape fuel combustion, consumer products, and architectural coatings.

The proposed project would result in the intense redevelopment of the site with conditionally permitted uses, including a drive-through car wash. The operational emissions from the existing uses as compared to the proposed project's operational emissions may be slightly higher, but not anticipated to be significant given that this project is a redevelopment of an infill parcel that currently is under developed with similarly conditionally permitted uses.

The YSAQMD has established an operational emissions threshold of significance for ozone precursors of 10 tons per year for ROG and NO_X, and 80 pounds per day for PM_{10}. The YSAQMD utilizes a screening process and separate model for CO impacts. The City's General Plan EIR standard mitigation measures apply to reduce any impacts to less than significant.

Construction Emissions

Construction activities associated with construction and implementation of the proposed project would result in temporary short-term emissions associated with vehicle trips from construction workers, operation of construction equipment, and the dust generated during construction activities. These temporary and short-term emissions would generate additional ozone precursors (ROG and NOx) as well as PM_{10}, which could exacerbate the County's existing non-attainment status for these criteria pollutants. It should be noted that construction vehicle emissions requirements in California have become stricter over time.

Due to the nonattainment designations of the area, YSAQMD has developed plans to attain the State and federal standards for ozone and particulate matter. The YSAQMD has established a construction emissions threshold of significance for ozone precursors of 10 tons per year for ROG and NO_X, and 80 pounds per day for PM_{10}. The YSAQMD utilizes a screening process and separate model for CO impacts. The threshold is summarized in the table below.

TABLE 1.
YSAQMD THRESHOLDS OF SIGNIFICANCE

Pollutant	Construction Thresholds	Operational Thresholds
ROG	10 tons/yr	10 tons/yr
NO_X	10 tons/yr	10 tons/yr
PM_{10}	80 lbs/day	80 lbs/day

Source: YSAQMD. Handbook for Assessing and Mitigating Air Quality Impacts. July 11, 2007.

The proposed project does not exceed this threshold. The proposed uses are already existing on the site with the exception of the car wash. However, to assess the proposed project's potential impacts related to construction and operational emissions of the pollutants presented in Table 1 above, the proposed project's construction and operational emissions were estimated using the California Emissions Estimator Model (CalEEMod). CalEEMod is a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including GHG emissions, from land use projects.

The CalEEMod software does not have car wash and restaurant land use types, which are two of the four uses proposed on the subject site. It does have Commercial and Convenience Market with Gas Pumps land use types, which are uses for this analysis. Where project-specific information was available, such information was applied in the model, but otherwise we relied on defaults. Conservative assumptions were used, which is what the defaults are presumed to do. Thus, the emissions presented in this IS/MND would be considered conservative, although no values were derived for the operations under the annual summary table. Staff speculates that this is given the varied uses that could not be found in the default setting of the program. However, staff ran a daily Winter summary of the program, which generated values for the operational-related emissions as shown in Tables 2 and 3. Tables 2 and 3 contain values for both daily Winter operational emissions and annual operational emissions.

Construction Emissions

The proposed project's estimated construction-related emissions are presented in Table 2. As shown in the table, the proposed project's construction emissions of ROG, NO_X, and PM_{10} would be below the applicable YSAQMD thresholds of significance.

TABLE 2. MAXIMUM PROJECT CONSTRUCTION-RELATED EMISSIONS

	ROG (tons/yr)	**NO_X (tons/yr)**	**PM_{10} (lbs/day)**
Chiles Plaza Project Emissions	0.1374 (tons/yr)	1.0475 (tons/yr)	0.1580 (tons/day)
	2.1685 (tons/day)	*10.1943 (tons/day)*	*5.7932 (lbs/day)*
YSAQMD Significance Threshold	*10*	*10*	*80.0*
Exceeds Threshold?	**NO**	**NO**	**NO**

CalEEMod estimates construction criteria air pollutant emissions in tons per year. A U.S. ton is equal to 2,000 pounds. The emissions estimate in ton per year is multiplied by 2,000 pounds to arrive at emissions volume in pounds per year. CalEEMod estimates a total of 246 construction days for the project. Average daily emissions (in pounds per day) are computed by dividing the annual construction emissions (in pounds per year) by the number of construction days.

Source: CalEEMod 2020 (see Appendix).

Table 3 shows that the proposed project's construction-related emissions would not result in a significant contribution to the region's nonattainment status of ozone or PM and would not violate an air quality standard or contribute substantially to an existing or projected air quality violation.

All projects within the YSAQMD, including the proposed project, are required to comply with all YSAQMD rules and regulations for construction, including Rule 2.1 (Control of Emissions), Rule 2.28 (Cutback and Emulsified Asphalts), Rule 2.5 (Nuisance), Rule 2.14 (Architectural Coatings), and Rule 2.11 (Particulate Matter Concentration). The rules and regulations are not readily applicable in CalEEMod and are, therefore, not included in the project-specific modeling. Because compliance with the rules and regulations would likely result in some additional reduction in emissions, construction emissions from the project would likely be slightly reduced from what is presented in Table 2 due to compliance with the rules and regulations. In addition, the City requires, as a standard condition of approval, that project construction comply with standard measures to minimize dust and ozone precursors during construction activities. Compliance with the aforementioned rules and regulations related to construction would help to minimize criteria pollutant emissions generated during construction activities.

Operational Emissions

The proposed project's estimated operational-related emissions are presented in Table 3. As shown in the table, the annual values for operational emissions ROG, NO_X, and PM_{10} are zero. Staff also ran a daily Winter summary of the project's emissions as well as annual emissions. The results are different possibly due to the fact that the default could not be applied for the various land uses without corrupting the resultant value. It is reasonable to conclude that there will be operational-related emissions, but they would not result in a significant contribution to the region's nonattainment status of ozone or PM and would not violate an air quality standard or contribute substantially to an existing or projected air quality violation given that most of the proposed uses are in existence at the subject site now and have been for years. The expansion of the uses would definitely generate operational-related emissions increases, however, there is no reason to believe that they will be significant.

TABLE 3.
MAXIMUM UNMITIGATED NEW OPERATIONAL EMISSIONS

	ROG (tons/yr)	NO_X (tons/yr)	PM_{10} (lbs/day)
Chiles Plaza Project Emissions	0	0	0
	2.5971 (tons/day)	*2.5416 (tons/day)*	*1.4371 (lbs/day)*
YSAQMD Significance Threshold	*10*	*10*	*80.0*
Exceeds Threshold?	**NO**	**NO**	**NO**

CalEEMod estimates operational criteria air pollutant emissions in tons per year. A U.S. ton is equal to 2,000 pounds. The emissions estimate in ton per year is multiplied by 2,000 pounds to arrive at emissions volume in pounds per year. Average daily emissions (in pounds per day) are computed by dividing the annual operational emissions (in pounds per year) by 365 days.
Source: CalEEMod 2020 (see Appendix).

Cumulative Emissions

The proposed project site is within an area currently designated as nonattainment for Ozone, PM_{10}, and $PM_{2.5}$. By nature, air pollution is largely a cumulative impact. Thus, the proposed project, in combination with other proposed and pending

projects in the region would significantly contribute to air quality effects within the SVAB, resulting in an overall significant cumulative impact. However, any single project is not sufficient enough in size to, alone, result in nonattainment of AAQS. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's incremental impact on air quality would be considered significant. In developing thresholds of significance for air pollutants, YSAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds that project's emissions would be cumulatively considerable, resulting in a significant adverse air quality impact to the region's existing air quality conditions. As discussed above, implementation of the proposed project would result in construction-related and operational emissions below YSAQMD's thresholds of significance. Therefore, based on the project's consistency with YSAQMD's thresholds of significance, the proposed project would not be anticipated to result in an incrementally significant contribution to a cumulatively significant impact.

Conclusion

As stated previously, the applicable regional air quality plans include the 2013 Ozone Attainment Plan, the $PM_{2.5}$ Implementation/Maintenance Plan, and the 2012 Triennial Assessment and Plan Update. According to YSAQMD, if a project would not result in significant and unavoidable air quality impacts, after the application of all feasible mitigation, the project may be considered consistent with the air quality plans. Based on the above, the proposed project's criteria pollutant emissions would be below applicable YSAQMD thresholds. As such, the project would not be considered to conflict with or obstruct implementation of regional air quality plans. Because the proposed project would not conflict with or obstruct implementation of the applicable air quality plans, violate any air quality standards or contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase in any criteria air pollutant, project impacts are considered ***less than significant***.

Response c): Sensitive receptors are those parts of the population that can be severely impacted by air pollution. Sensitive receptors include children, the elderly, and the infirm. The construction and operation of the proposed project would not contribute substantial concentrations of pollutants to sensitive receptors. Additionally, the proposed project would not contribute significantly to any CO hotspots. YSAQMD CEQA Air Quality Handbook establishes project screening thresholds for CO impacts. Projects would be found to have a potential to violate the CO standard if a traffic study finds that LOS would not be reduced to an unacceptable level or substantially worsen an already existing peak-hour LOS F. The proposed project's impacts do not trigger these thresholds, therefore, is presumed to not require additional evaluation as further discussed in the November 18, 2021, Traffic Study for the project prepared by Fehr & Peers, which reads: "Table 3 presents the average delay and LOS under Existing Plus Project conditions. The project would increase PM peak hour delay and worsen LOS at several study intersections. However, all study intersections would continue to meet the applicable City of Davis LOS policy (LOS E or better) during the PM peak hour."

There are several existing similar land uses located within the project vicinity. However, implementation of the proposed project would not expose these sensitive receptors to substantial pollutant concentrations. Air emissions would be generated during the construction phase of the project, but would be short term in duration. The construction phase of the project would be temporary and short-term, and the construction-related emissions is not anticipated exceed the YSAQMD thresholds.

Implementation of the proposed project is not anticipated to result in a significant increased exposure of sensitive receptors to localized concentrations of toxic air contaminants (TACs), or create a CO hotspot. This project would have a ***less than significant*** impact relative to sensitive receptors.

Response d):

Odors

According to the California Air Resources Board (CARB) Handbook, some of the most common sources of odor complaints received by local air districts are sewage treatment plants, landfills, recycling facilities, waste transfer stations, petroleum refineries, biomass operations, auto body shops, coating operations, fiberglass manufacturing, foundries, rendering plants, and livestock operations. The surrounding land uses consists of mostly storage and commercial uses, including multifamily residential uses. Accordingly, the proposed project is not located in the vicinity of any substantial objectionable odor sources such as those mentioned herein.

Operational use of the proposed project would not generate notable odors. The proposed project involves gas station, drive-through car wash, office spaces, convenient retails space, and a restaurant. These land uses are not typically associated with the creation of substantial objectionable odors. Occasional mild odors may be generated during landscaping maintenance (equipment exhaust), but the project would not otherwise generate odors.

Diesel fumes from construction equipment and delivery trucks are often found to be objectionable; however, construction of the proposed project would be temporary and diesel emissions would be temporary and regulated. Implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

Other Emissions

Sensitive receptors are those parts of the population that can be severely impacted by air pollution. Sensitive receptors include children, the elderly, and the infirm. The construction and operation of the proposed project would not contribute substantial concentrations of pollutants to sensitive receptors. Additionally, the proposed project would not contribute significantly to any CO hotspots.

There are several existing similar land uses located within the project vicinity. However, implementation of the proposed project would not expose these sensitive receptors to substantial pollutant concentrations. Air emissions would be generated during the construction phase of the project, but would be short term in duration.

The construction phase of the project would be temporary and short-term, and the construction-related emissions is not anticipated exceed the YSAQMD thresholds.

Implementation of the proposed project is not anticipated to result in a significant increased exposure of sensitive receptors to localized concentrations of toxic air contaminants (TACs), or create a CO hotspot. This project would have a ***less than significant*** impact relative to this topic.

IV. BIOLOGICAL RESOURCES

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

Responses to Checklist Questions

General Plan EIR Significance Criteria

The thresholds of significance applied in the General Plan EIR are as follows:

- A significant impact would occur if a policy change in the General Plan update would result in a substantial adverse change in the environment related to biological resources.
- The General Plan would have a significant impact if it would adversely affect sensitive natural communities, including riparian communities, wetlands, or other sensitive habitats.
- Substantially reduce the acreage of any agricultural crop, or common natural community that serves as valuable foraging or nesting habitat.
- The General Plan was determined to have a significant impact if implementation of the General Plan could result in the filling or other disturbance of jurisdictional wetlands.

- Based on the State CEQA Guidelines and professional judgement, it was determined that implementation of the General Plan update would result in a significant impact on biological resources if it would substantially affect a special-status plant or wildlife species or the species'.
- The General Plan was determined to have a significant impact if it was determined that implementation of the General Plan would adversely affect locally designated landmark trees or heritage oak trees.

The General Plan EIR considered whether development under the General Plan had the potential to significantly impact sensitive plant and wildlife species and concluded that significant impacts to special status plants are only likely to occur at the Covell Center site, which is unrelated to the project site. The General Plan EIR determined that development under the General Plan may result in disturbance or nest failure of Swainson's hawks; mortality or displacement of western burrowing owls; and impacts to the giant garter snake.

The proposed project's potential impact is not more significant than was considered in the General Plan EIR because the proposed project site is located in an urbanized area within the City of Davis, is currently undeveloped but does not feature any unique natural communities, riparian vegetation, or aquatic features. Furthermore, it is surrounded by commercial uses and is subject to the Policy HAB 1.1 and associated standards. Compliance with General Plan policy HAB 1.1 and associated standards, intended to preserve existing natural habitat areas, will be imposed on the project as a condition of approval and will reduce the foregoing impacts identified in the General Plan EIR. Implementation of the proposed project would not result in impacts related to wildlife movement or the use of wildlife nursery sites and would not conflict with the applicable General Plan policies related to biological resources.

The General Plan EIR did not consider whether implementation of the General Plan would interfere substantially with the movement of any resident or migratory fish or wildlife species, which is addressed in the following section.

Response a): The project site currently has a gas station with a restaurant and convenience store, and is surrounded by developed urban uses. Special-status plant or wildlife species have not been recorded on the project site. The project site is currently developed and disturbed. There is no known riparian or other sensitive habitat types located on-site. However, there are approximately 8 trees, according to the Arborist Report prepared for this project, which qualify as the City of Davis trees of significance. In the city of Davis, trees of significance are trees with 5" or more in diameter.

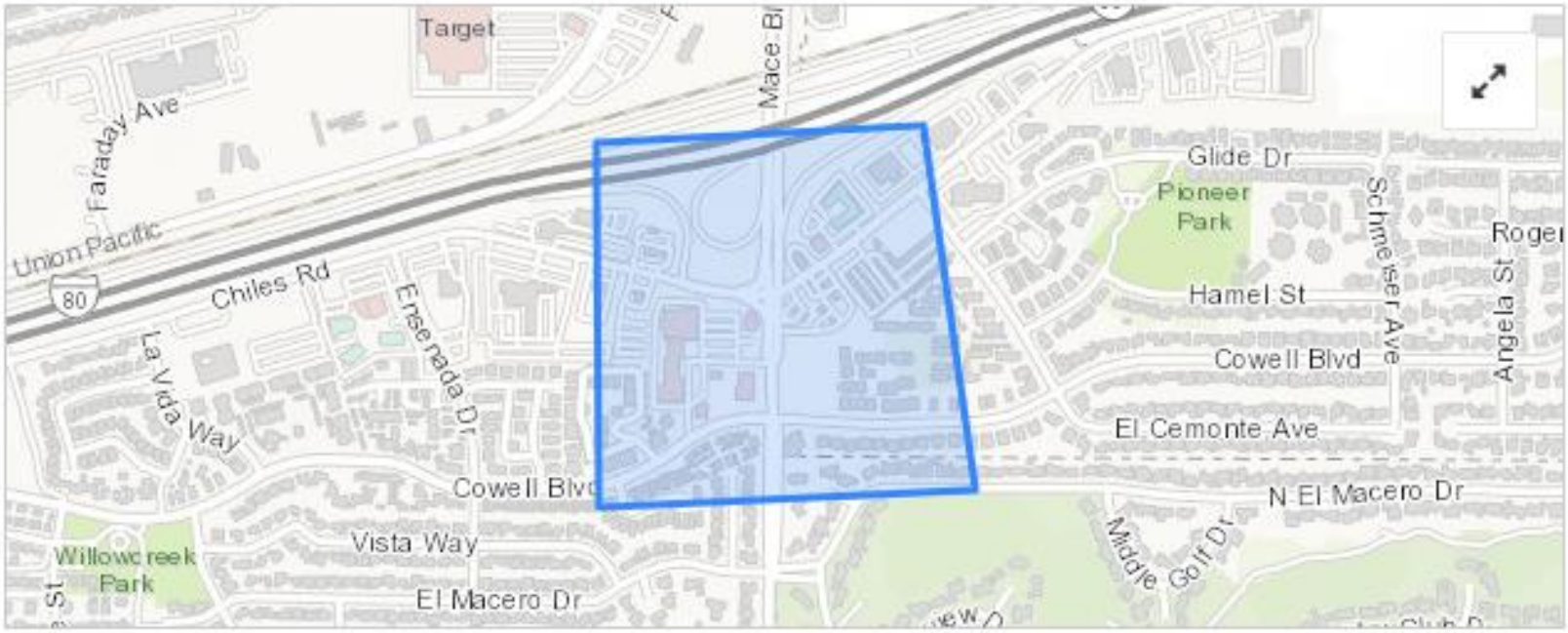
Historical and continuing site disturbance and urban activities makes the presence of many special-status animals on the project site unlikely. However, nesting birds could utilize the few on-site trees. The bird species which have been documented to occur within the City of Davis include: burrowing owl (*Athene cunicularia*), northern harrier (*Circus hudsonius*), Swainson's hawk (*Buteo swainsoni*), tricolored blackbird (*Agelaius tricolor*), western snowy plover (*Charadrius alexandrinus nivosus*), western

yellow-billed cuckoo (*Coccyzus americanus occidentalis*), and white-tailed kite (*Elanus leucurus*). Suitable habitat for ground-nesting burrowing owl species is not currently known to existing on the project site.

There are variety of raptors and/or birds protected by the Migratory Bird Treaty Act (MBTA) that could utilize that are known to be seen in the area. A search on September 30, 2021, of the U. S. Fish & Wildlife Service IPaC revealed that there are 10 Endangered Species and 15 Migratory Birds that occur within and outside of the project area. These are outside ¼ mile disturbance buffer of the subject property. The area of potential effect/impact map and data shown below are more than a ¼ mile disturbance buffer of the subject property.

Chiles Plaza

Gas Station, Drive-through Car Wash, Office & Restaurant Uses



LOCATION Yolo County, California

CREATED September 30, 2021

Figure 5: Area of Potential Impact Map

Figure 5A: Area of Potential Impact Aerial Map Exhibit

Below is a list of the migratory birds.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act [6] and the Bald and Golden Eagle Protection Act [7].

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.

RELATED LINKS

Birds of Conservation Concern

Measures for avoiding and minimizing impacts to birds

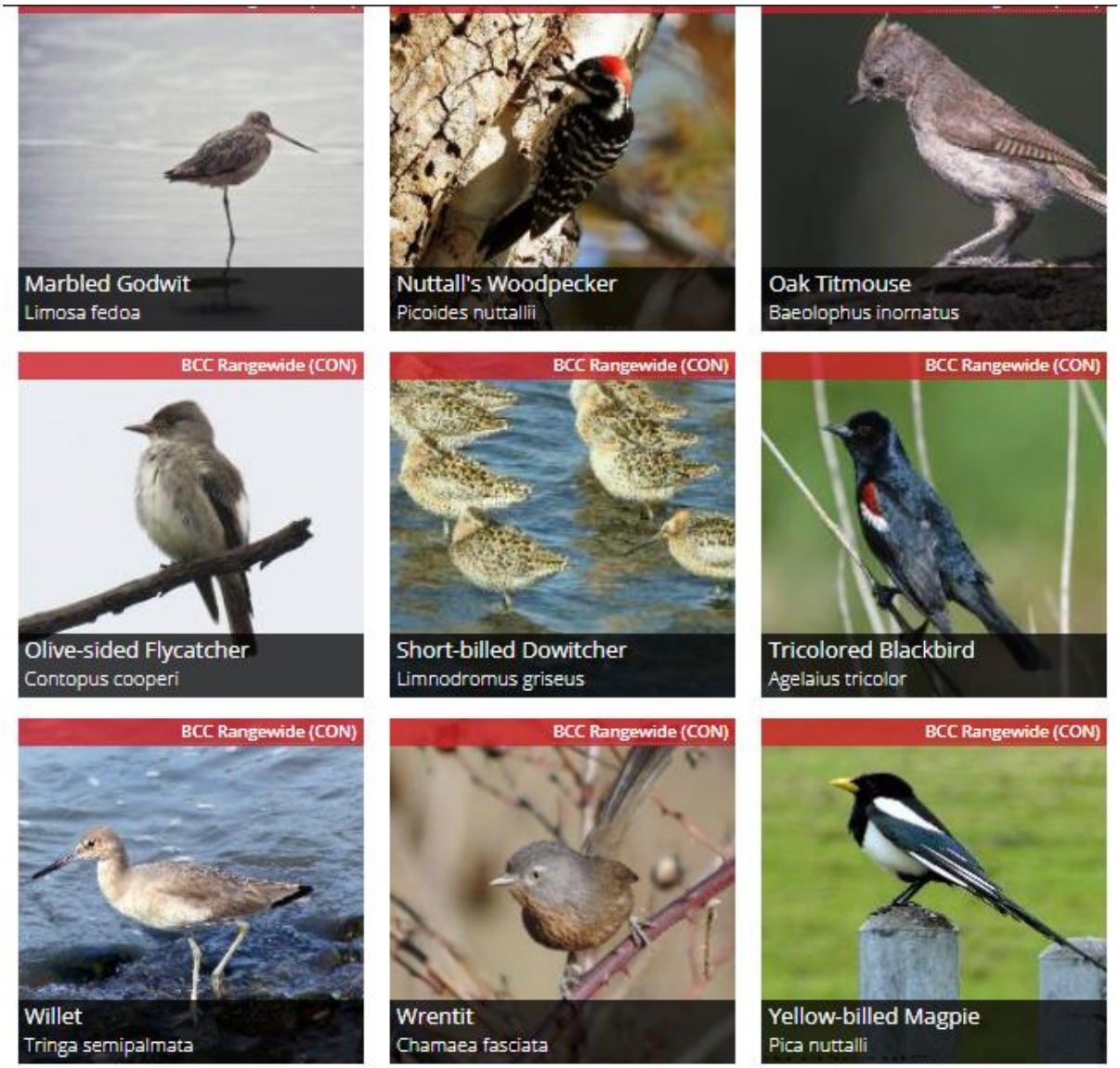
Nationwide conservation measures for birds

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.

THUMBNAILS | LIST

PROBABILITY OF PRESENCE SUMMARY



Below is the list of endangered species.

Note: Information for Planning and Consultation (IPaC) is a project planning tool, which streamlines the environmental review process by providing information on the location of listed species and other US Fish & Wildlife Service (USFWS) trust resources that could potentially be affected by a project. Source: https://ecos.fws.gov/ipac/project/NJEUAPIZEFCCZDUNCSYVJ3Y434/resources#endangered-species. Retrieved September 30, 2021

Endangered species

Listed species [1] 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 [2]).

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.

Additional information on endangered species data is provided below.

The following species are potentially affected by activities in this location:

THUMBNAILS LIST SPECIES GUIDELINES

Birds

Reptiles

Amphibians

Fishes

Insects

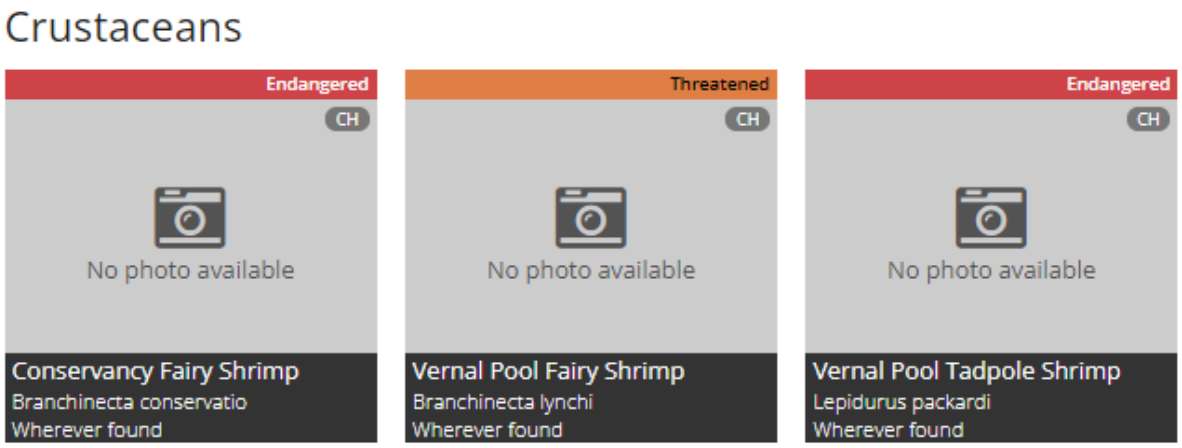


Figure 6: Migratory Birds with Area of Potential Impact

According to USFWS IPaC, the above list is an automatically generated list of species and other resources, such as critical habitat (collectively referred to as trust resources) under the USFWS's jurisdiction that are known or expected to be on or near the project area. It states that 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.

The subject site has 7 significant trees that are proposed to be removed to accommodate the proposed project. However, the potential for them to provide significant habitat for these birds are limited given their location near a freeway interchange and high traffic volume.

In addition, according to the City's wildlife biologist there is no historic record or current evidence of sensitive species nesting on or within a ¼ mile disturbance buffer of the subject property. However, should the proposed project's improvement activities occur during the nesting season (generally March 1-August 31), there could disturbance to nesting sites if they were present during construction in the vicinity. So, standard City condition of approval requiring biological survey prior to commencement of construction activities will apply.

The subject project site is designated for urban development by the City's General Plan, South Davis Specific Plan and Zoning Ordinance. Thus, potential adverse impacts associated with the potential loss of nesting habitat is deemed overridden by the City's General Plan EIR.

The City is a member of Yolo Habitat Conservation/ Natural Communities Conservation Plan (HCP/NCCP). As a member agency to the HCP/ NCCP, it has discretion over this project. If habitat for covered species is present, which is very unlikely the project's proximity to Putah Creek and Yolo Bypass, so associated HCP/NCCP impact avoidance and minimization measures (AMMs) will not be applicable. Thus, any potential impacts will be reduced to a ***less than significant.***

Response b): Riparian habitat is found in the interface between land and a river or stream. This habitat is significant in ecology, environmental management, and civil engineering because of its role in soil conservation, its habitat biodiversity, and the influence it has on fauna and aquatic ecosystems, including grassland, woodland, wetland or even non-vegetative.

Sensitive natural communities are those that are considered rare in the region, support special-status plant or wildlife species, or receive regulatory protection (i.e., §404 and 401 of the Clean Water Act, the CDFG §1600 et seq. of the California Fish and Game Code, and/or the Porter-Cologne Act). There is no evidence that the project site supports any riparian habitat or sensitive natural communities no withstanding the USFWS IPaC list above. Implementation of the proposed project would result in a ***less than significant*** impact.

Response c): The proposed project does not include any construction activities that are within or immediately adjacent to wetlands, drainages, or other water bodies. These resources are not known to be present on the project site at the moment given that no biological study was performed. However, Putah Creek is in the vicinity of the project site. It is not anticipated that the proposed three lot parcel map subdivision will adversely impact Putah Creek given many other residential houses in the area. It is acknowledged that the development of the lots will have impacts. The prescribed mitigation measures herein and the implementation of the proposed project would result in a ***less than significant*** impact.

a-c conclusion.

The project site represents poor quality urban habitat that does not feature any unique natural communities, riparian vegetation, or aquatic features. The General Plan EIR did not consider whether implementation of the General Plan would interfere substantially with the movement of any resident or migratory fish or wildlife species.

The General Plan EIR considered whether development under the General Plan had the potential to significantly impact sensitive plant and wildlife species and concluded that significant impacts to special status plants are only likely to occur at the Covell Center site, which is unrelated to the project site. The General Plan EIR determined that development under the General Plan may result in disturbance or nest failure of Swainson's hawks; mortality or displacement of western burrowing owls; and impacts to the giant garter snake. The proposed project's potential impact is not more significant than was considered in the General Plan EIR because the proposed project site is located in an urbanized area within the City of Davis, is currently developed with commercial uses, and is subject to the Policy HAB 1.1 and associated standards. Compliance with General Plan policy HAB 1.1 and associated standards, intended to preserve existing natural habitat areas, is imposed on the project as a condition of approval and will reduce the foregoing impacts identified in the General Plan EIR. Implementation of the proposed project would not result in impacts related to wildlife movement or the use of wildlife nursery sites.

Response d): The project site is currently developed with a gas station, restaurant and convenient retail shop, and surrounded by existing urban development. The site does not serve as a wildlife corridor, or nursery site. The proposed project would not 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. Implementation of the proposed project would result in a ***less than significant*** impact.

Response e): Article 37.03.060 of the City's Municipal Code requires approval of a valid tree removal request and/or tree modification permit prior to cutting down, pruning substantially, encroaching into the protection zone of, or topping or relocating any landmark tree or tree of significance. Furthermore, Article 37.05 contains protection procedures to be implemented during grading, construction, or other site-related work. Such procedures, include, but are not limited to, inclusion of tree protection measures on approved development plans and specifications, and inclusion of tree care practices, such as the cutting of roots, pruning, etc., in approved tree modification permits, tree preservation plans, or project conditions.

The proposed project is located within the boundaries of the Yolo Habitat Conservation Plan/Natural Conservation Community Plan (HCP/NCCP). The proposed project would be required to comply with the policies within the Yolo HCP/NCCP, when applicable.

The City of Davis regulates tree planting and removal within the community in Chapter 37, Tree Planting, Preservation, and Protection, of the Municipal Code. The City's Tree Ordinance defines five categories of protected trees:

- Landmark Trees: Any tree which is determined by resolution of the City Council to be of high value because of its species, size, age, form, historical significance, or some other professional criterion. The Landmark Tree List, available from the Public Works Department, lists and identifies these trees.
- Trees of Significance: Any tree which measures 5 inches or more in Diameter at Breast Height (4'-6" above ground height).
- Street Trees: Any tree planted and/or maintained by the City, or recorded as a street tree, adjacent to a street or within a city easement or right-of-way, on private property, within the street tree easement. The Public Works Department maintains a master list of street trees.
- City Trees: Any tree, other than a street tree, planted or maintained by the City within a City easement, right-of-way, park, greenbelt, public place or property owned or leased by the City.
- Private Tree: Any tree privately owned and growing on private property, which may include a tree designated as a landmark tree and/or tree of significance, as defined within the definitions section of the Tree Ordinance, Chapter 37.

According to the Arborist report prepared for this project, the subject site currently contains 7 trees of significance. However, none is a Landmark tree. Removal of the 7 trees from the project site is subject to the City's Tree Ordinance. Compliance with the City's Tree Ordinance would be addressed by a standard City condition of

approval, which requires preparation of a Tree Protection Plan for trees being preserved and approval of Tree Modification Permit for trees being removed with standard measures for tree replacement or payment for the appraised value of the trees. The Tree Protection Plan would include measures to ensure that all trees to be preserved would be protected during construction of the project. This would ensure that the project would have a ***less than significant*** impact relative to local policies and ordinances protecting biological resources.

Response f): The Yolo Natural Heritage Program is a countywide Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP) for the 653,820-acre planning area. The Yolo Natural Heritage Program is intended to conserve the natural open space and agricultural landscapes that provide habitat for many special status and at-risk species found within the habitats and natural communities in Yolo County. The Yolo Natural Heritage Program establishes measures that will be undertaken to conserve important biological resources, obtain permits for urban growth and public infrastructure projects, and continue Yolo County's rich agricultural heritage.

The HCP/NCCP was adopted by the Davis City Council in May 2018. Per the HCP/NCCP, the land cover type on the project site is “Developed.” Developed areas are dominated by pavement and building structures. Vegetation in developed areas generally consists of vegetated corridors (e.g., vegetation maintained adjacent to highways) and patches of mostly ornamental vegetation, such as tree groves, street strips, shade trees, lawns, and shrubs that are typically supported by irrigation. Urban lands cover 45,700 acres, or seven percent, of the Yolo HCP/NCCP Area at this period of HCP/NCCP adoption. Implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

V. CULTURAL RESOURCES

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?				X
c) Disturb any human remains, including those interred outside of formal cemeteries?			X	

Responses to Checklist Questions

General Plan EIR Significance Criteria

The thresholds of significance applied in the General Plan EIR are as follows:

- A significant impact would occur if a policy change in the General Plan update would result in a substantial adverse change in the environment related to cultural resources (see Questions a-c below).
- The General Plan would have a significant impact if potential development proposed in the plan would result in the damage or destruction of known and/or unknown cultural resources (see Questions a-c below).

Response a-b): The subject property is not a historical resource pursuant to California Code Regulations, Title 14, and Section 15064.5. Title 14. Therefore, implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

The General Plan EIR considered whether development under the General Plan would have an impact on historic resources and concluded the potential impact was less than significant because the General Plan contains policies intended to preserve, restore, and protect historic and prehistoric archaeological resources in Davis. The proposed project is consistent with the applicable General Plan policies and standards related to historic resources: Policy HIS 1.2, HIS 1.3 and HIS 1.4. The property was not identified in the 2015 citywide survey as a potential historical resource, and staff has determined that the project has no local historical significance to warrant additional environmental review.

As a result of previous disturbance on the site, the proposed project site is unlikely to contain any archeological resources. The General Plan EIR considered whether development under the General Plan would have an impact on known or unknown cultural resources and concluded that buildout of the General Plan would result in a significant impact to unknown cultural resources as a result of ground disturbance associated with infrastructure development and construction of new structures. General Plan Policy HIS 1.2 and associated standards call for the incorporation of measures to protect and preserve historic and archaeological resources into all planning and development. The requirements of Policy HIS 1.2 and the associated

standards serve as uniformly applicable mitigation for all development within the City. The proposed project is required to adhere to the foregoing policy and a Condition of Approval has been imposed upon the proposed project to implement Policy HIS 1.2 and the associated standards. Consistent with General Plan Standard HIS 1.2b, the Condition of Approval requires that historic and archaeologic resources found prior to development or during construction shall be evaluated before development takes place or construction continues. In particular, the Condition of Approval requires if subsurface historic remains, prehistoric or historic artifacts, other indications of archaeological resources, or cultural and/or tribal resources are found during grading and construction activities, all work within 100 feet of the find shall cease, the City of Davis Department of Community Development and Sustainability shall be notified, and the applicant shall retain an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology, as appropriate, to evaluate the find(s). If tribal resources are found during grading and construction activities, the applicant shall notify the Yocha Dehe Wintun Nation. The condition further outlines the requirements should anything be found.

Considering the history of disturbance of the project site during past agricultural use, and its development with commercial uses, and the imposition of General Plan Policy HIS 1.2 as a condition of approval on the proposed project, the project would not be anticipated to result in any new specific effects or effects that are more significant than what was already analyzed in the General Plan EIR.

Response c): Staff consulted with YOCHA DEHE Wintun Nation regarding the proposed project on October 7, 2021. On October 11, 2021, the nation responded that there are no known cultural resources near the project and a cultural monitoring is not needed.

The General Plan EIR did not analyze the potential for buildout of the General Plan to result in disturbance of human remains.

However, based on known historical and archaeological resources in the region, the potential for undocumented underground cultural resources in the region, and the nature of the proposed project, the City's standard protocol regarding archaeological resources based on the General Plan mitigation measures would apply. Any impact is considered ***less than significant***.

VI. ENERGY

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

Responses to Checklist Questions
General Plan EIR Significance Criteria

The City's General Plan EIR acknowledged that implementation of the General Plan would result in an irreversible commitment of energy resources; however, the City's General Plan EIR did not include any specific significance criteria or analysis of potential impacts related to energy.

Responses a - b): The City's General Plan EIR did not analyze impacts related to energy. Appendix F of the State CEQA Guidelines requires consideration of the potentially significant energy implications of a project. CEQA requires mitigation measures to reduce "wasteful, inefficient and unnecessary" energy usage (Public Resources Code Section 21100, subdivision [b][3]). According to Appendix F of the CEQA Guidelines, the means to achieve the goal of conserving energy include decreasing overall energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources.

Both the California Building Energy Efficiency Code and the CalGreen Code are intended to increase the energy efficiency of new structures. Section 8.01.090 of the City of Davis Municipal Code requires mandatory compliance with Tier 1 standards of the CalGreen Code. New developments constructed pursuant to the Tier 1 standards of the CalGreen Code result in a 10 percent improvement in energy efficiency as compared to the mandatory CalGreen Code requirements. Furthermore, Section 8.01.067 of the Davis Municipal Code includes updated requirements related to energy efficient for nonresidential project to include:

> "In addition, a PV system sized to offset a portion of the total building energy use based on TDV energy is required. The PV sizing shall be consistent with the methodology included in the cost effectiveness study provided by TRC. The PV sizing calculations were developed such that PV size would be the lessor of approximately eighty percent offset of the building's modeled annual electric load or fifteen DC watts per square feet of solar zone.*"

The proposed project would be subject to all relevant provisions of California Building Energy Efficiency Code and the CalGreen Code. Adherence to the most recent CALGreen Code and Building Energy Efficiency Standards would ensure that the new consumption would consume energy efficiently. In addition, electricity supplied to buildings within the City would comply with the State's Renewable

Portfolio Standard (RPS), which requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020 and to 60 percent by 2030. Thus, a portion of the energy consumed during operations would originate from renewable sources. Therefore, the proposed project would have **a less-than-significant impact** associated with energy.

In particular, the proposed project would be considered "wasteful, inefficient, and unnecessary" if it were to violate state and federal energy standards and/or result in significant adverse impacts related to project energy requirements, energy inefficiencies, energy intensiveness of materials, cause significant impacts on local and regional energy supplies or generate requirements for additional capacity, fail to comply with existing energy standards, otherwise result in significant adverse impacts on energy resources, or conflict or create an inconsistency with applicable plan, policy, or regulation.

The amount of energy to be used at the project site would directly correlate to the nature of the proposed uses, including the energy consumption of associated office appliances, car wash, convenience store appliances, gas station lighting, indoor and outdoor lighting. Other major sources of proposed project's energy consumption include fuel used by vehicle trips generated during project construction and operation, and fuel used by off-road construction vehicles during construction.

In additions, sustainable design features should include high levels of envelope insulation, high efficiency HVAC, LED Lighting, electric vehicle charging outlets, and a low water use landscaping and irrigation system.

The proposed project would be in compliance with all applicable Federal, State, and local regulations regulating energy usage. For example, PG&E is responsible for the mix of energy resources used to provide electricity for its customers, and it is in the process of implementing the Statewide Renewable Portfolio Standard (RPS) to increase the proportion of renewable energy (e.g. solar and wind) within its energy portfolio. PG&E is expected to achieve at least a 33 percent mix of renewable energy resources by 2020, and 50 percent by 2030.

Additionally, energy-saving regulations, including the latest State Title 24 building energy efficiency standards and as would be amended in the future, should be applicable to the proposed project at the time of construction. Other Statewide measures, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g. the Pavley Bill and the Low Carbon Fuel Standard), would improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time.

It is also noted that the City of Davis has established its own utility company, Valley Clean Energy (VCE), which utilizes 100 percent renewable energy sources. The project may be required or choose to subscribe to the City's VCE utility company for energy use.

The proposed project is not anticipated to result in any significant adverse impacts related to project energy requirements, energy use inefficiencies, and/or the energy intensiveness of materials by amount and fuel type for each stage of the project including construction, operations, maintenance, and/or removal. PG&E and VCE, the current electricity and natural gas providers to the site, maintains sufficient capacity to serve the proposed project.

The proposed project would comply with all existing energy standards, including those established by the City of Davis, and would not result in significant adverse impacts on energy resources. Furthermore, existing connections exist between the project site and nearby pedestrian and bicycle pathways, and public transit access exists nearby, reducing the need for local motor vehicle travel. For these reasons, the proposed project would not be expected cause an inefficient, wasteful, or unnecessary use of energy resources. This is a ***less than significant*** impact.

VII. GEOLOGY AND SOILS

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation***	***Less Than Significant Impact***	***No Impact***
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
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.			X	
ii) Strong seismic ground shaking?			X	
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 direct or indirect risks to life or property?		X		
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	

Responses to Checklist Questions

General Plan EIR Significance Criteria

The thresholds of significance applied in the General Plan EIR are as follows:

- A significant impact would occur if a policy change in the General Plan update would result in a substantial adverse change in the environment related to soils, geology, or mineral resources.
- The General Plan was determined to have a significant impact if development would expose people, structures, or property to major geologic hazards such as earthquakes or ground failures.
- The General Plan was determined to have a significant impact if development

would result in deformation of foundations or damage to structures by soils that exhibit moderate to high shrink-swell characteristics.

The General Plan EIR concluded that the risk of development exposing people or structures to major geologic hazards, such as earthquakes or ground failure was less than significant because development would be required to comply with General Plan Policy HAZ 2.1, requiring enforcement of the Uniform Building Code, which was intended to protect structures from collapse or major property damage during a seismic event. Since adoption of the City's General Plan EIR, the Uniform Building Code has been superseded by the California Building Standards Code (CBSC). The CBSC includes design standards for new structures that are intended to reduce the potential for new structures to suffer significant damage or collapse from earthquakes of various intensities. Compliance with the CBSC would fulfill the intent of General Plan Policy HAZ 2.1. The impacts of the proposed project would not be more significant than those analyzed in the General Plan EIR because the proposed project would be required to comply with the CBSC.

The proposed project would not result in any new specific effects or effects that are more significant than what was previously analyzed in the General Plan EIR. Given that the proposed project would be subject to statewide and local guidelines and standards related to seismic design, the project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. Preparation of a soils report and implementation of all recommendations represents implementation of General Plan Standard HAZ 2.1a, which is considered a uniformly applicable mitigation measure for all development within the City. The soils report would serve to substantially mitigate any potential impacts related to soil subsidence. As such, the project would not result in new specific impacts or effects that are more significant than what was already analyzed in the General Plan EIR as related to seismic-related ground failure, including liquefaction and landslides, and would not 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.

Responses a.i), a.ii): The California Geologic Survey (CGS) evaluates faults and determines if a fault should be zoned as active, potentially active, or inactive. All active faults are incorporated into a Special Studies Zone, also referred to as an Alquist-Priolo Special Study Zone. The project site is not within an Alquist-Priolo Special Study Zone. In fact, there are no known faults (active, potentially active, or inactive) that traverse through the City of Davis.

The San Andreas Fault system located to the west and the Eastern Sierra fault system located to the east are the closest significant fault systems. Numerous quakes along these fault systems have been felt in Davis. Major quakes occurred in 1833, 1868, 1892, 1902, 1906, and most recently in 2014, but Davis suffered no significant damage.

The Office of Planning and Research has placed the Davis area in Seismic Activity Intensity Zone II, which indicates that the maximum intensity of an earthquake would be VII or VIII on the Modified Mercalli Intensity Scale. An earthquake of such magnitude would result in slight damage in specially designed structures; considerable in ordinary substantial buildings, with partial collapse; great in poorly built structures." The Uniform Building Code places all of California in the zone of greatest earthquake severity because recent studies indicate high potential for severe ground shaking.

There will always be a potential for ground shaking caused by seismic activity anywhere in California, including the project site. In order to minimize potential damage to the buildings and site improvements, all construction in California is required to be designed in accordance with the latest seismic design standards of the California Building Code. Design in accordance with these standards would reduce any potential impact to a ***less than significant*** level.

Responses a.iii), c), d): Liquefaction normally occurs when sites underlain by saturated, loose to medium dense, granular soils are subjected to relatively high ground shaking. During an earthquake, ground shaking may cause certain types of soil deposits to lose shear strength, resulting in ground settlement, oscillation, loss of bearing capacity, land sliding, and the buoyant rise of buried structures. The majority of liquefaction hazards are associated with sandy soils, silty soils of low plasticity, and some gravelly soils. Cohesive soils are generally not considered to be susceptible to liquefaction. In general, liquefaction hazards are most severe within the upper 50 feet of the surface, except where slope faces or deep foundations are present. Because the compaction and placement history of the fill is unknown, and the anticipated seismic and groundwater conditions, the exact liquefaction potential is unknown, although it is expected to be low during seismic events.

Lateral spreading typically results when ground shaking moves soil toward an area where the soil integrity is weak or unsupported, and it typically occurs on the surface of a slope, although it does not occur strictly on steep slopes. Oftentimes, lateral spreading is directly associated with areas of liquefaction. Areas in the region that are susceptible to this hazard are located along creeks or open water bodies, or within the foothills to the west. There are no creeks or open bodies of water within an appropriate distance from the project site for lateral spreading to occur on the project site. For this reason, the probability of lateral spreading occurring on the project site is low.

Expansive soils are those that undergo volume changes as moisture content fluctuates; swelling substantially when wet or shrinking when dry. Soil expansion can damage structures by cracking foundations, causing settlement and distorting structural elements. Expansion is a typical characteristic of clay-type soils. Expansive soils shrink and swell in volume during changes in moisture content, such as a result of seasonal rain events, and can cause damage to foundations, concrete slabs, roadway improvements, and pavement sections.

Soil expansion is dependent on many factors. The more clayey, critically expansive surface soil and fill materials will be subjected to volume changes during seasonal fluctuations in moisture content. Sycamore silt loam, drained, zero percent slopes, is the only soil located on the project site. The Sycamore series consists of soils formed under poorly drained conditions, although the project site soils are drained. The soils formed in mixed sedimentary alluvium. The site surface soils have low expansion potential.

Monitoring of subsidence in Yolo has been occurring since 1999 on a regional level. The monitoring efforts show that the greatest subsidence occurs in the corridor that runs north from Davis, through Woodland, north to Zamora and through to the northeast corner of the county. The subsidence does not appear to be strictly uniform, a characteristic of subsidence, but rather a result of several factors. Subsidence is likely a result of the groundwater pumping, water usage, and other related issues, but additional regional studies are needed over an extended period to better understand the subsidence. Subsidence is present throughout the City of Davis, including the project site, albeit at a low level.

If near-surface soils vary in composition both vertically and laterally, strong earthquake shaking can cause non-uniform compaction of the soil strata, resulting in movement of the near-surface soils. Since the compaction and placement history of the fill is unknown, removal and re-compaction would likely be required during grading.

The General Plan EIR considered whether development would result in the potential for soil erosion and concluded that given the types of soil present within the City and with the implementation of the General Plan policies, the impact would not be significant. Because the conclusion applies to the entire City, the development of the proposed project will not have more significant effects than analyzed in the prior EIR.

In addition, the City's General Plan identifies policies that provide explicit actions for reducing construction-related water quality impacts, including the erosion of topsoil.[3] The General Plan policies require the continued application and enforcement National Pollutant Discharge Elimination System (NPDES) regulations for sites over one acre. Chapter 30.03.010 of City of Davis Municipal Code adopts by reference the standards of the State of California's NPDES General Permit for Stormwater Discharges Associated with Construction Activity (NPDES General Permit No. CAS000002). Only construction that would disturb more than one acre of land is subject to the permitting requirements of the NPDES General Permit. The project site is only 1.78-acre, and, as such, the project would be subject to the NPDES General Permit requirements. Nevertheless, pursuant to Section 30.03.010 of the City's Municipal Code, the City's Director of Public Works, or duly appointed designee, is allowed to require the implementation of Best Management Practices (BMP) to reduce erosion. The proposed project would be required, per conditions of

[3] City of Davis. *Program EIR for the City of Davis General Plan Update and Project EIR for Establishment of a New Junior High School* [pg. 51-2 to 51-8]. January 2000.

approval, to provide and implement an Erosion Control Plan and comply with the City's Stormwater Management and Discharge Control Ordinance. Thus, the project would not result in any new specific effects or effects that are more significant than what was already analyzed in the General Plan EIR.

Overall, the project site has a low potential for liquefaction, lateral spreading, subsidence, and landslides. Notwithstanding, standard City soils report prior to construction will assist in the determination of whether the project site will be suitable for development, and with implementation of the standard soils investigation, this potential impact would be ***less than significant***.

Response a.iv): There are several categories of landslides including rock falls, deep slope failure, and shallow slope failure. Factors such as the geological conditions, drainage, slope, vegetation, and others directly affect the potential for landslides. One of the most common causes of landslides is construction activity that is associated with road building (i.e. cut and fill).

The project site is relatively flat and there are no major slopes in the vicinity of the project site. Slope instability at the project site, as a result of seismic events, has very low potential because of the lack of relief across the area and its distance from active and potentially active faults. The project site is not located in the foothills, mountain terrain, or along a riverbank. As such, the project site is exposed to little or no risk associated with landslides. The proposed project would be required to comply with all applicable development requirements included in the California Building Code. This is a ***less than significant*** impact and no mitigation is required.

Response b): The project site is currently developed with gas station, convenient store and restaurant. There is no evidence that it is at a significant risk of erosion under the existing conditions, or proposed condition. Construction activities including grading could temporarily increase soil erosion rates during and shortly after project construction. Construction-related erosion could result in the loss of a substantial amount of nonrenewable topsoil and could adversely affect water quality in nearby surface waters. The RWQCB requires a project specific Storm Water Pollution Prevention Plan (SWPPP) to be prepared for each project that disturbs an area one acre or larger. The SWPPP will include project specific best management measures that are designed to control drainage and erosion. As a result, the City's standard SWPPP requirement will apply. The SWPPP and the project specific drainage plan would reduce the potential for erosion. Implementation of the SWPPP requirements would ensure that the proposed project would result in a ***less-than-significant*** impact relative to this topic.

Response e): The proposed project would not require the use of septic tanks or alternative wastewater disposal systems for the disposal of wastewater. The project has been designed to connect to the existing City sewer system, and septic systems will not be used. Implementation of the proposed project would result in ***no impact*** relative to this topic.

Response f): Known paleontological resources or sites are not located on the project site. Additionally, unique geologic features are not located on the site. The site is currently developed and surrounded by existing urban development, and the proposed project is considered a redevelopment for intensification purposes. As such, impacts to paleontological resources or unique geologic features are not anticipated. This is a ***less than significant*** impact.

VIII. GREENHOUSE GAS EMISSIONS

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*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 gasses?			X	

EXISTING SETTING

General Plan EIR Significance Criteria

The General Plan EIR did not include thresholds of significance related to GHG emissions or analyze the impacts. Nonetheless, it is noted that the City has adopted a Climate Action and Adaptation Plan (CAAP), which addresses GHG emissions associated with buildout of the City.

RESPONSES TO CHECKLIST QUESTIONS

Responses a - b):

The 2008 document, *City of Davis Greenhouse Gas Emissions Inventory & Forecast Update*, includes an estimation of citywide 2010 emissions levels, which was previously used as the basis of the City of Davis's citywide GHG reduction target thresholds.[4] The 2010 emissions levels were then used to generate emissions reduction targets, which were adopted by the City on November 18, 2008. The emissions reductions goals adopted in 2008 provided a desired rate of reduction, which were more ambitious than Assembly Bill (AB) 32 or SB 32, and included achievement of citywide carbon neutrality by 2050. In addition to the aggressive, desired reduction targets, the City also adopted minimum reduction targets equal to the State mandated reductions levels. By adopting two reductions targets, the City created a range of acceptable emissions reductions, where the minimum reductions target would achieve statewide reductions goals based on AB 32, while the desired reduction level would surpass the state minimum. To ensure that new developments within the City would not impede the City's progress towards the City's adopted emissions reductions targets, the City identified carbon allowances for new developments. The carbon allowances set a maximum emissions level for the operation of new developments,[5] while maintaining the City's emissions reductions goals.[6]

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4 City of Davis Department of Community Development and Sustainability. *City of Davis Greenhouse Gas Emissions Inventory & Forecast Update*. June 2008.

5 City of Davis. *Staff Report: Adoption Davis Climate Action and Adaptation Plan*. June 2, 2010.

6 Niemeier, Deb. *Carbon Development Allowances*. September 2008.

On March 5, 2019, the City Council adopted a resolution declaring a climate emergency. As part of the resolution, the City's adopted goal of net carbon neutrality by the year 2050 was accelerated to the year 2040. Achievement of carbon neutrality by the year 2040 would place the City on an emissions reductions trajectory that surpasses the minimum reduction targets previously established by the City, which were based on AB 32, as well as the City's previously adopted desired reductions levels, thus surpassing the emissions reductions goals of the City's Climate Action and Adaptation Plan (CAAP).[7] Despite the acceleration of the desired date for carbon neutrality, the resolution declaring a climate emergency did not include any updates regarding the anticipated means of achieving carbon neutrality. Consequently, while the City's climate emergency resolution accelerated the City's net carbon neutrality target year from 2050 to 2040, the City's CAAP continues to provide the planning level approach to meeting the City's emissions goals. As stated in Table 1 of the City's CAAP, carbon neutrality by 2050 is a "desired" goal and was anticipated to be achieved by a "combination of actions at the local, regional, national, and international levels and carbon offsets."

Although the YSAQMD has not officially adopted any thresholds of significance for GHG emissions, the YSAQMD currently recommends use of the Sacramento Metropolitan Air Quality Management District's (SMAQMD's) adopted GHG emissions thresholds of significance. The threshold of significance for both construction and operational GHG emissions is 1,100 $MTCO_2e$/yr. In addition to the 1,100 metric tons of CO_2 equivalents per year ($MTCO_2e$/yr) SMAQMD threshold, the City of Davis has adopted per unit and per capita carbon allowances that set a maximum emissions level for the operation of new developments,[8] while maintaining the City's emissions reductions goals.[9]

Background

Emissions of Greenhouse Gasses (GHGs) contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and City, and virtually every individual on Earth. An individual project's GHG emissions are at a micro-scale level relative to global emissions and effects to global climate change; however, an individual project could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. As such, impacts related to emissions of GHG are inherently considered cumulative impacts.

Various gases in the Earth's atmosphere, classified as atmospheric greenhouse gases (GHGs), play a critical role in determining the Earth's surface temperature.

7 City of Davis. *Staff Report: Adoption Davis Climate Action and Adaptation Plan*. June 2, 2010.

8 City of Davis. *Staff Report: Adoption Davis Climate Action and Adaptation Plan*. June 2, 2010.

9 Niemeier, Deb. *Carbon Development Allowances*. September 2008.

Solar radiation enters Earth's atmosphere from space, and a portion of the radiation is absorbed by the Earth's surface. The Earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation.

Naturally occurring greenhouse gases include water vapor (H_2O), carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and ozone (O_3). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also greenhouse gases, but they are, for the most part, solely a product of industrial activities. Although the direct greenhouse gases CO_2, CH_4, and N_2O occur naturally in the atmosphere, human activities have changed their atmospheric concentrations. From the pre-industrial era (i.e., ending about 1750) to 2011, concentrations of these three greenhouse gases have increased globally by 40, 150, and 20 percent, respectively (Intergovernmental Panel on Climate Change [IPCC], 2013).

Greenhouse gases, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), ozone (O_3), water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs).

The emissions from a single project, such as the proposal, will not cause global climate change. However, GHG emissions from multiple projects throughout the world could result in a cumulative impact with respect to global climate change. Therefore, the analysis of GHGs and climate change presented in this section is presented in terms of the proposed project's contribution to cumulative impacts and potential to result in cumulatively considerable impacts related to GHGs and climate change.

Cumulative impacts are the collective impacts of one or more past, present, and future projects that, when combined, result in adverse changes to the environment. In determining the significance of a proposed project's contribution to anticipated adverse future conditions, a lead agency should generally undertake a two-step analysis. The first question is whether the *combined* effects from *both* the proposed project *and* other projects would be cumulatively significant. If the agency answers this inquiry in the affirmative, the second question is whether "the proposed project's *incremental* effects are cumulatively considerable" and thus significant in and of themselves. The cumulative project list for this issue (climate change) comprises anthropogenic (i.e., human-made) GHG emissions sources across the globe and no project alone would reasonably be expected to contribute to a noticeable incremental change to the global climate. However, legislation and executive orders on the subject of climate change in California have established a statewide context and process for developing an enforceable statewide cap on GHG emissions. Given the nature of environmental consequences from GHGs and global climate change, CEQA requires that lead agencies consider evaluating the cumulative impacts of GHGs. Small contributions to this cumulative impact (from which significant effects

are occurring and are expected to worsen over time) may be potentially considerable and, therefore, significant.

Construction GHG Analysis
Construction-related GHG emissions are a one-time release and are, therefore, not typically expected to generate a significant contribution to global climate change, as global climate change is inherently a cumulative effect that occurs over a long period of time and is quantified on a yearly basis. Construction-related activities that would generate GHGs include construction worker commute trips, haul trucks carrying supplies and materials to and from the project site, and off-road construction equipment (e.g., dozers, loaders, excavators). The proposed redevelopment project would contribute but to an insignificant level towards GHG. Therefore, this is a ***less than significant*** impact relative to this topic.

Operational GHG Analysis
The proposed project would be a direct and indirect source of GHG emissions, in that it would generate and attract vehicle trips in the region (mobile source GHG emissions), and generate area source GHG emissions. The mobile source GHG emissions would be entirely from vehicles, while the area source GHG emissions would be primarily from landscape fuel combustion, consumer products, and architectural coatings. Operational GHG emissions would also be generated from solid waste disposal, water usage, and electricity usage.

The project is consistent with the existing commercial operations, and would have minor increase to the capacity of the project site as a car wash and increased sizes of the restaurant and convenience store, including addition of office spaces are proposed. The proposal, however, is consistent with the conditionally permitted land uses for the property. It is expected that the new replacement structures will be required to comply with Chapter 8.01 of the City of Davis' Municipal Code, which requires that buildings are to comply with the Tier 2 standards of the California Green Building Standards (CALGreen) Code.

Overall, the operational GHG emissions are not anticipated to increase significantly beyond the existing condition. This is a ***less than significant*** impact relative to this topic.

Conclusion
As discussed under the Air Quality factor, the CalEEMod result finds that the proposed project's emissions impact does not exceed the established threshold. The operational GHG emissions impacts would be considered ***less than significant***.

IX. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***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 or excessive noise for people residing or working in the project area?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?			X	

Responses to Checklist Questions

General Plan EIR Significance Criteria

The thresholds of significance applied in the General Plan EIR is as follows:

- The General Plan would have a significant impact if the General Plan would expose construction workers to hazardous materials or if proposed uses involve the delivery, manufacture, or storage of hazardous materials that would pose a public safety threat.

Responses a - b): The City's Planning Area has eight sites that are included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 or that need further investigation; four underground storage tanks (USTs) at former gas stations, one active UST at a gas station, and three sites located on government or former industrial sites. However, the sites are regulated by existing federal and state policies and have been or are being investigated and remediated.

The proposed project would result in the demolition of existing structures, including the fuel storage tanks, and the replacement with new structures to accommodate the proposed uses. The proposed gas station land use would involve routinely transport or use of gasoline that could pose hazards. The operational phase of the proposed project would include the storage and sales of gasoline. The site currently has underground fuel storage tanks that will be demolished.

The General Plan EIR anticipated that development in the City could involve the uses of hazardous materials during construction-related activities and could expose workers to an increased risk of exposure to materials. The impact was considered significant in the short term. Mitigation measures were not proposed. The use, transportation, and disposal of construction-related hazardous materials, such as paints, solvents, and fuels, is strictly regulated. Applicable regulations include the uniformly applicable federal regulations related to the Resource Conservation and Recovery Act, the Toxic Substances Control Act, and the Hazardous Materials Transportation Law. In addition to the foregoing federal regulations, uniformly applicable state laws and regulations relating to hazardous materials include the Hazardous Waste Control Law, and the California Accidental Release Program. The regulations foregoing would be applicable during both construction and operation of the proposes project. For construction activities in particular, the City's General Plan includes Standard HAZ 4.1a, which ensures the proper handling of hazardous materials during construction through the preparation and implementation of a hazardous materials management plan. Implementation of Standard HAZ 4.1a would ensure that construction activity related to the proposed project would not result in the improper handling of hazardous materials, which would reduce the likelihood of an accidental release of such material. Therefore, the proposed project will not result in a project-specific effect or an effect greater than that studied in the General Plan EIR related to the use of hazardous materials during construction-related activities.

Construction equipment and materials would likely require the use of petroleum-based products (oil, gasoline, diesel fuel), and a variety of common chemicals including paints, cleaners, and solvents. Transportation, storage, use, and disposal of hazardous materials during construction activities would be required to comply with applicable federal, state, and local statutes and regulations. Compliance would ensure that human health and the environment are not exposed to hazardous materials. Therefore, the proposed project would have a ***less than significant*** impact relative to this issue.

Response c): The project site is approximately 0.6-mile driving distance from Pioneer Elementary School, being the nearest school. The operations of proposed project is not anticipated to emit hazardous emissions or result in the storage or handling of hazardous or acutely hazardous materials, substances or waste above the level of existing conditions. Implementation of the proposed project would result in a ***less than significant*** impact relative to this topic.

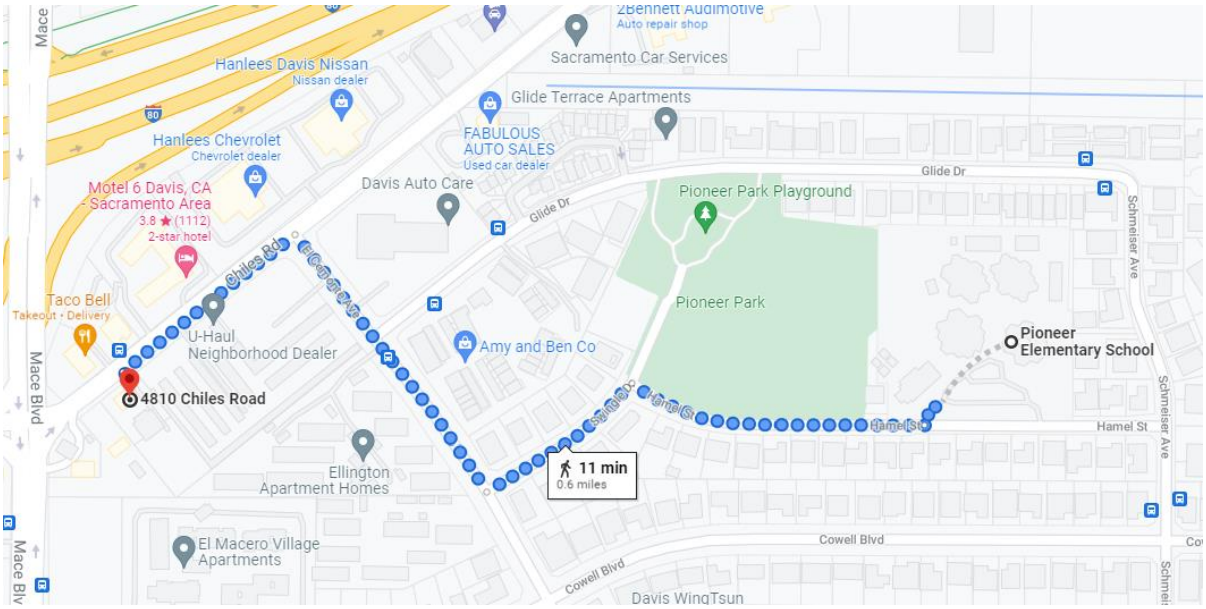

Figure 7: School Vicinity Map (Google Map, 2021)

Sources: https: https://www.google.com/maps/dir/Pioneer+Elementary+School,+5215+Hamel+St,+Davis,+CA+95618/4810+Chiles+Rd,+Davis,+CA+95618/@38.5509207,-121.6914575,17z/data=!3m1!4b1!4m13!4m12!1m5!1m1!1s0x80852ba3495559ef:0x780413c226c7e986!2m2!1d-121.6850882!2d38.5510752!1m5!1m1!1s0x80852bb904c10103:0x6dfe89f5204244cf!2m2!1d-121.6934255!2d38.5506491?hl=en; Retrieved on October 5, 2021.

Response d): The General Plan EIR did not consider whether development would create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment or be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

According to the search of California Department of Toxic Substances Control (DTSC) site, there are no Federal Superfund Sites, State Response Sites, but a Voluntary Cleanup Sites within half a mile of the project site. The project site is not included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5. In addition, according to records search, there are no investigation sites within half a mile of the subject site. See map below.

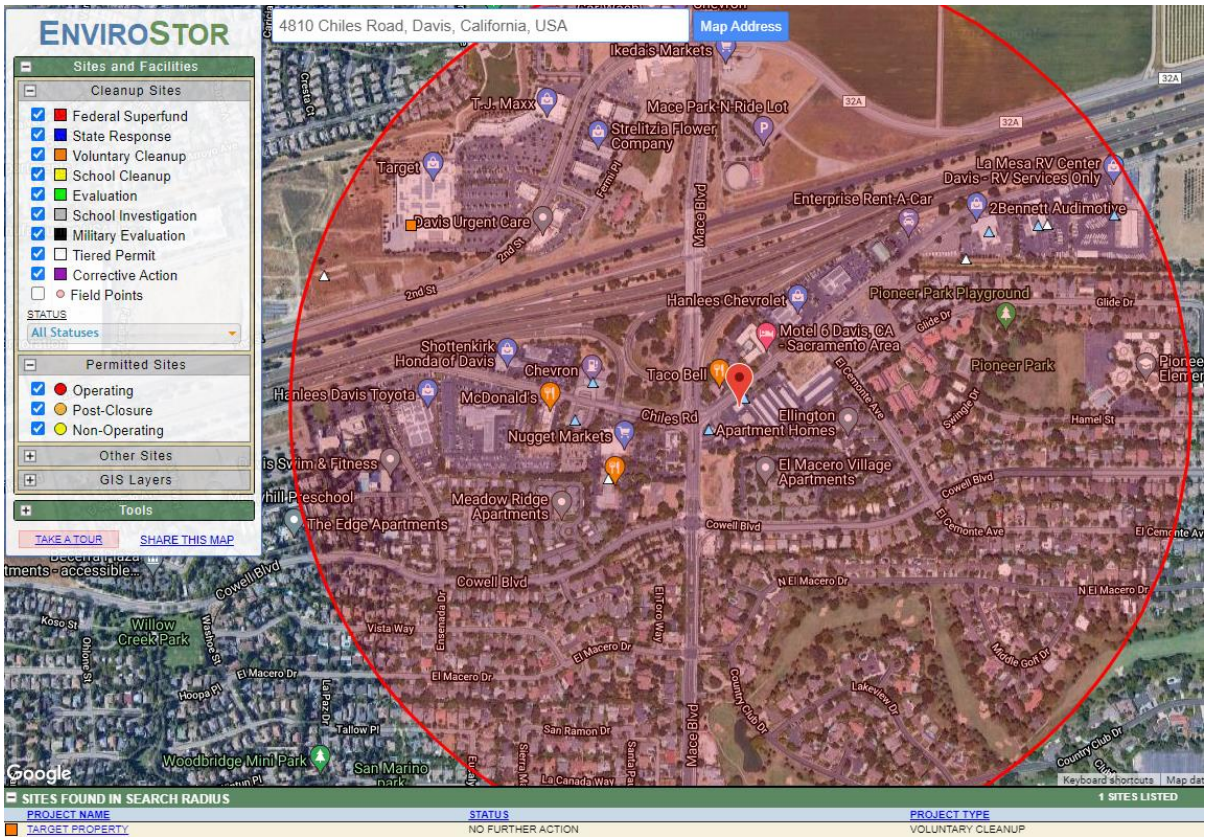

Figure 8: Environstor Map of Area Potential Impact

Source: https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=4810+Chiles+Road%2C+Davis%2C+California. Retrieved: October 5, 2021.

On the next page is NEPAssist Report on the subject property. The report indicates that there are no hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school

4810 Chiles Road

Figure 8A: NEPAssist Map

4810 Chiles Rd NEPAssist Report

Map

Geographic coordinates:

POINT (38.550652,-121.693463)
with buffer 0.5 miles

Note: The information in the following reports is based on publicly available databases and web services. The National Report uses nationally available datasets and the State Reports use datasets available through the EPA Regions. Click on the hyperlinked question to view the data source and associated metadata.

Figure 8B: NEPAssist Map

National Report

Project Location	38.550652,-121.693463
Within 0.5 miles of an Ozone 8-hr (1997 standard) Non-Attainment/Maintenance Area?	yes
Within 0.5 miles of an Ozone 8-hr (2008 standard) Non-Attainment/Maintenance Area?	yes
Within 0.5 miles of a Lead (2008 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a SO2 1-hr (2010 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a PM2.5 24hr (2006 standard) Non-Attainment/Maintenance Area?	yes
Within 0.5 miles of a PM2.5 Annual (1997 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a PM2.5 Annual (2012 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a PM10 (1987 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a Federal Land?	no
Within 0.5 miles of an impaired stream?	no
Within 0.5 miles of an impaired waterbody?	no
Within 0.5 miles of a waterbody?	no
Within 0.5 miles of a stream?	yes
Within 0.5 miles of an NWI wetland?	loading... ***May take several minutes***
Within 0.5 miles of a Brownfields site?	no
Within 0.5 miles of a Superfund site?	no
Within 0.5 miles of a Toxic Release Inventory (TRI) site?	no
Within 0.5 miles of a water discharger (NPDES)?	no
Within 0.5 miles of a hazardous waste (RCRA) facility?	yes
Within 0.5 miles of an air emission facility?	no
Within 0.5 miles of a school?	yes
Within 0.5 miles of an airport?	no
Within 0.5 miles of a hospital?	no
Within 0.5 miles of a designated sole source aquifer?	no
Within 0.5 miles of a historic property on the National Register of Historic Places?	no
Within 0.5 miles of a Toxic Substances Control Act (TSCA) site?	no
Within 0.5 miles of a Land Cession Boundary?	yes
Within 0.5 miles of a tribal area (lower 48 states)?	no
Within 0.5 miles of the service area of a mitigation or conservation bank?	yes
Within 0.5 miles of the service area of an In-Lieu-Fee Program?	yes

Figure 8C: NEPAssist Summary Report

https://nepassisttool.epa.gov/nepassist/analysis.aspx. Retrieved October 5, 2021

Implementation of the proposed project would result in a ***less than significant*** impact relative to this environmental topic.

Response e): The proposed project site is not located within the vicinity of a public or private airstrip and is not covered by an airport land use plan. The nearest airport to the project site is the UC Davis Airport, located approximately 7.2 miles southwest of the project site. The UC Davis Airport is operated as a general aviation airport. The Airport offers the sale of aviation fuel (100 LL) and rents hangers, open shades and tie downs for aircraft storage. Additionally, there are two fixed base operators located at the Airport that provide aircraft maintenance (Davis Air Repair), flight instruction, and aircraft rentals (Cal Aggie Flying Farmers). The project site is not located within the approach or take-off zones of the UC Davis Airport, nor is it located within the overflight zones of the airport. There are no private airstrips within a 2-mile vicinity of the project site. Thus, the proposed project would not result in any new specific effects or effects that are more significant than what was previously analyzed in the General Plan EIR, ***no impact*** would occur.

Response f): Implementation of the proposed project would not result in any substantial modifications to the existing roadway system and would not interfere with potential evacuation or response routes used by emergency response teams. The proposed project would also not interfere with any emergency response plan or emergency evaluation plan. While the proposed project will increase the intensity of uses on the subject property, the traffic analysis prepared for the project did not find any significant traffic impacts. In addition, the General Plan EIR did not consider whether implementation of the General Plan would result in development that would impair implementation of an adopted emergency response plan or emergency evacuation plan. This is a ***less than significant*** impact.

Response g): The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (winds, temperatures, humidity levels and fuel moisture contents) and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area to mass ratio and require less heat to reach the ignition point, while fuels such as trees have a lower surface area to mass ratio and require more heat to reach the ignition point.

The site is not located within an area where wildland fires occur. The site is surrounded by urban developed land uses. This is a ***less than significant*** impact.

X. HYDROLOGY AND WATER QUALITY

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:		X		
(i) Result in substantial erosion or siltation on- or off-site;		X		
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;		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	

Responses to Checklist Questions

General Plan EIR Significance Criteria

The thresholds of significance applied in the General Plan EIR are as follows:

- A significant impact would occur if a policy change in the General Plan update would result in a substantial adverse change in the environment related to Hydrology and Water Quality..
- A proposed land use map alternative was determined to have a significant impact if the alternative would result in a substantial increase in the rate or amount of surface runoff in a manner that would result in on- or off-site flooding.
- or create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage facilities.
- The General Plan was determined to have a significant impact if the General Plan would expose people or property to water-related hazards, such as flooding.
- The General Plan was determined to have a significant impact if the alternative would substantially degrade water quality.

- The General Plan was determined to have a significant impact if the alternative would substantially deplete groundwater resources, degrade groundwater quality, or cause a potential public health hazard

Responses a-b),d-e): The General Plan EIR determined that construction and grading activities associated with development under the General Plan would not degrade water quality because projects would be required to comply with Policy WATER 2.3 as well as Action WATER 2.3a. In addition to the General Plan policies presented in the General Plan EIR, the General Plan EIR further noted that development projects within the City would also be subject to the City's uniformly applicable grading and erosion control regulations. The General Plan EIR concluded that implementation of the foregoing General Plan policies and actions Citywide, and the application of the uniformly applicable measures included in the City's Municipal Code would ensure that development within the City would not result in impacts to water quality.

Implementation of proposed project would not violate any water quality or waste discharge requirements. Construction activities including grading could temporarily increase soil erosion rates during and shortly after project construction. Construction-related erosion could result in the loss of soil and could adversely affect water quality in nearby surface waters. The RWQCB requires a project specific SWPPP to be prepared for each project that disturbs an area one acre or larger. The SWPPP is required to include project specific best management measures that are designed to control drainage and erosion. The City's standard SWPPP mitigation measures are adopted as standard conditions of approval, which their implementation would require the preparation of a SWPPP to ensure that the proposed project would result in a ***less-than-significant*** impact relative to this topic.

In June 2016, the City of Davis began receiving treated surface water through the Woodland Davis Clean Water Agency (WDCWA) at an amount of approximately 10.2 million gallons per day (mgd) to reduce the City's reliance on groundwater and deep aquifer wells. The City plans to maximize surface water use by routinely using the surface water supply as a base load and using the deep aquifer wells as a supplemental supply during the summer when demands would exceed the surface water supply capacity. Given that the majority of the City's water supplies are provided by surface water sources, increases in demand for water supplies associated with the proposed project would not be anticipated to substantially deplete groundwater supplies.

The proposed project would connect to the City of Davis water system. There are three primary water rights and contracts (collectively, "water supplies") that are used within the City's existing service area and Sphere of Influence (SOI). All three of these water supplies are used to meet the water demands for the City's residents. In several areas within the City, the water supplies can be interchanged and commingled for delivery to end users. The water supplies are:

- Woodland-Davis Clean Water Agency (WDCWA) State Water Resources Control Board (SWRCB) Appropriative Water Right Permit 20281;
- WDCWA's Central Valley Project (CVP) Contract No. 14-06-200-7422X-R-1; and
- City of Davis' groundwater rights.

The proposed project would not 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).

The new impervious surfaces, such as pavement, concrete, and structures that would be built on the project site, could reduce infiltration capacity. However, the project site is currently developed with pervious and impervious surfaces. Once the project site is redeveloped, the amount of impervious surfaces would likely be similar to the existing condition. The project would also use low water use irrigation systems and landscaped bio-swales as necessary. In addition, the project is not anticipated to significantly affect groundwater quality because sufficient stormwater infrastructure would be constructed as part of project to detain and filter stormwater runoff and prevent long-term water quality degradation. Therefore, project construction and operation would not substantially deplete or interfere with groundwater supply or quality. This impact would be ***less than significant***.

The risks of flooding hazards in the City of Davis and immediate surroundings are primarily related to large, infrequent storm events. These risks of flooding are greatest during the rainy season, which is between November and March. Flooding events can result in damage to structures, injury or loss of human and animal life, exposure to waterborne diseases, and damage to infrastructure. In addition, standing floodwater can destroy agricultural crops, undermine infrastructure and structural foundations, and contaminate groundwater.

The 100-Year floodplain denotes an area that has a one percent chance of being inundated during any particular 12-month period. Floodplain zones (Special Flood Hazard Areas [SFHA]) are determined by the Federal Emergency Management Agency (FEMA) and used to create Flood Insurance Rate Maps (FIRMs). These tools assist communities in mitigating flood hazards through land use planning. FEMA also outlines specific regulations, intended to be adopted by the local jurisdictions, for any construction, whether residential, commercial, or industrial within 100-year floodplains.

Lands within the FEMA-designated 100-year floodplain (SFHA) are subject to mandatory flood insurance as required by FEMA. The insurance rating is based on the difference between the base flood elevation (BFE), the average depth of the flooding above the ground surface for a specific area, and the elevation of the lowest floor. Because the City of Davis participates in the National Flood Insurance Program, it must require development permits to ensure that construction materials and methods will mitigate future flood damage, and to prevent encroachment of development within floodways. New construction and substantial improvements of residential structures are also required to “have the lowest habitable floor (including the basement if it is, or easily could be ‘habitable’) elevated to or above the base flood level.”

The proposed project is shown on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) number 06113C0612G, effective June 18, 2010. The project site is located within FEMA Zone X (un-shaded).

Figure 9: 4810 & 4748 Chiles Road Flood Zone Map

Tsunamis are defined as sea waves created by undersea fault movement. A tsunami poses little danger away from shorelines; however, when a tsunami reaches the shoreline, a high swell of water breaks and washes inland with great force. Waves may reach 50 feet in height on unprotected coasts. Historic records of the Bay Area used by one study indicate that nineteen tsunamis were recorded in San Francisco Bay during the period of 1868-1968. Since Davis is many miles inland from the San Francisco Bay Area and associated water bodies, the project site is not exposed to flooding risks from tsunamis and adverse impacts would not result.

A seiche is a standing wave in an enclosed or partially enclosed body of water. Seiches and seiche-related phenomena have been observed on lakes, reservoirs, swimming pools, bays, harbors and seas. The key requirement for formation of a seiche is that the body of water be at least partially bounded, allowing the formation of the standing wave. There are no large bodies of standing water in the vicinity of the project site. As such, there is no potential for the project to be exposed to seiches.

The General Plan EIR considered the impact of development under the General Plan on groundwater resources and concluded that because the General Plan contains policies WATER 1.1, 1.2, and 1.3, as well as Policy WATER 2.2, the impact would be less than significant.

Policy WATER 1.1 directs the City to focus on demand reduction and water conservation over the development of additional water resources while Policy WATER 1.2 requires water conserving landscaping. The project would be required to comply with WATER 1.2 through design of low water use landscaping and inclusion of water efficient indoor fixtures, which is also required by CalGreen.

Policy WATER 1.3 prohibits the City from approving development unless an adequate supply of quality water is available prior to occupancy of development. The City is further directed by Policy WATER 2.2 to protect groundwater resources to preserve quantity and quality. Since the adoption of the City's General Plan EIR, the City has switched primary water supply from groundwater to surface water, which is now provided through the Woodland Davis Clean Water Agency. Considering the City's reliance on surface water for the majority of drinking water supplies, the project's potential to result in excess demand on groundwater is considered limited. Nevertheless, consistency with Policy Water 1.3 of the City's General Plan is discussed in further depth in Section XIX. Adequate water supplies exist to serve the project and the project would comply with Policies Water 1.3 and 2.2., especially given that it is an existing project proposed for minor intensification.

Considering the project's compliance with General Plan policies WATER 1.1, 1.2, 1.3, and 2.2, the proposed project will not result in any new specific effects or effects that are more significant than what was already analyzed in the General Plan EIR. Overall, this impact is ***less than significant***.

Responses c.i)-c.iv): The General Plan EIR considered whether development under the General Plan would generate substantial runoff or substantially modify existing drainage patterns. The General Plan EIR concluded that even with General Plan Policies WATER 3.1 and WATER 3.2 and associated standards and actions, buildout of the General Plan would result in a significant impact. However, implementation of mitigation measures included in the General Plan EIR would reduce the potential for buildout of the General Plan to result in significant impacts to drainage patterns to a less-than-significant level. In particular, General Plan EIR Mitigation Measure HYD-2.1 ensured that buildout of the City would not result in development within flood-prone areas of the City. The proposed project is not within a flood-prone area of the City, and, thus, is not subject to General Plan EIR Mitigation Measure HYD-2.1. Similarly, the proposed project would not be subject to the requirements of policies WATER 3.1 and 3.2, because both policies relate to citywide drainage infrastructure, rather than project-level considerations. However, the proposed project would be subject to Standard WATER 3.2a, which requires that all new development be designed to accommodate flows from specified design storm events. Considering that the project site is not located in a flood-prone area and would comply with all applicable General Plan policies and standards identified in the General Plan EIR, the proposed project would not result in any new specific effects or effects that are more significant than what was already analyzed in the General Plan EIR.

When land is in a natural or undeveloped condition, precipitation will infiltrate/percolate the soils and mulch. Much of the rainwater that falls on natural or undeveloped land slowly infiltrates the soil and is stored either temporarily or permanently in underground layers of soil. When the soil becomes completely soaked or saturated with water or the rate of rainfall exceeds the infiltration capacity of the soil, the rainwater begins to flow on the surface of land to low lying areas, ditches, channels, streams, and rivers. Rainwater that flows off of a site is defined as storm water runoff. When a site is in a natural condition or is undeveloped, a larger percentage of rainwater infiltrates into the soil and a smaller percentage flows off the site as storm water runoff.

The infiltration and runoff process is altered when a site is developed with urban uses. Houses, buildings, roads, and parking lots introduce asphalt, concrete, and roofing materials to the landscape. These materials are relatively impervious, which means that they absorb less rainwater. As impervious surfaces are added to the ground conditions, the natural infiltration process is reduced. As a result, the volume and rate of storm water runoff increases. The increased volumes and rates of storm water runoff can result in flooding in some areas if adequate storm drainage facilities are not provided.

There are no rivers, streams, or watercourses located on or immediately adjacent to the project site. As such, there is no potential for the project to alter a watercourse, which could lead to on or offsite flooding. Drainage improvements associated with the project site would be located on the project site, and the project would not alter or adversely impact offsite drainage facilities.

The proposed project would not likely increase substantially the amount of impervious surfaces on the project site compared to the existing condition. The proposed project would require the installation of storm drainage infrastructure to ensure that storm waters properly drain from the project site.

The proposed project will be required to comply with the Phase II Small MS4 General Permit (see Article 30.02 and 30.04 of the City of Davis Municipal Code). The proposed project must meet the guidelines and requirements set forth in the "Phase II Small MS4 General Permit, 2013-0001-DWQ," dated February 5, 2013, adopted by the City of Davis. Permittees must implement a post-construction stormwater management program, as specified in Section E.12 of the Phase II Small MS4 General Permit

In order to meet the guidelines and requirements set forth in the "Phase II Small MS4 General Permit, 2013-0001-DWQ," permanent storm water control measures would be incorporated into the project in order to mitigate the impacts of pollutants in storm water runoff from the proposed project. The proposed project would incorporate site design measures, source control measures, and treatment control measures.

The construction of stormwater drainage facilities would not substantially alter the existing drainage pattern of the area, or alter the course of a stream or river. As required by Mitigation Measures Hydro-1, the applicant would be required to submit a plan identifying the stormwater control measures that would be implemented. Additionally, Mitigation Measures Hydro-2 requires documentation that the stormwater runoff from the site is treated per the standards in the California Stormwater Best Management Practice New Development and Redevelopment Handbook and Section E.12 of the Phase II Small MS4 General Permit.

Project compliance with standard City requirements ensures that he construction and operation of the proposed project and construction of the stormwater drainage facilities would not substantially alter the existing drainage pattern or significantly increase runoff or erosion. Therefore, the proposed project would have a ***less than significant impact*** relative to site drainage.

XI. LAND USE AND PLANNING

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*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	

Responses to Checklist Questions

General Plan EIR Significance Criteria

The thresholds of significance applied in the General Plan EIR are as follows:

- A significant impact would occur if the General Plan alternative or one of its components would conflict with the environmental plans and goals of the local community or other planning regulations.
- A significant impact would occur if a policy change in the General Plan update would result in substantial adverse change in the environment related to land use, aesthetics, or hazardous materials.

Response a): The General Plan EIR did not analyze the potential for buildout of the General Plan to result in the physical division of an established community. The project site is surrounded by existing development including residential and commercial uses. The project would be considered infill and would not have the potential to physically divide an established community. A project risks dividing an established community if the project would introduce infrastructure or alter land uses so as to change the land use conditions in the surrounding community, or isolate an existing land use. This is not the situation with the proposed project. The project site is located within the Davis city limits and is surrounded by urban developed properties. The project would result in redevelopment of the site, and the proposal would allow similar existing uses plus car wash and office space. The proposed redevelopment of the subject site would not result in any physical barriers, such as a wall, or other division, that would divide an existing community. The project would have no impact in regards to the physical division of an established community. ***No impact*** would occur.

Response b): The General Plan EIR concluded that infill development under the General Plan would not create conflicts with environmental plans or goals. The analysis included in this Checklist demonstrates that the project would comply with all policies and goals within the General Plan that relate to avoiding or mitigating environmental impacts. The proposed project would not result in any new specific effects or effects that are more significant than what was already analyzed in the General Plan EIR.

The proposed project is not anticipated to 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. The proposed project consists of conditionally permitted uses under the Auto Center zoning for the site, and is consistent with the existing General Commercial land use designation and the Auto Center zoning. Proposed development will comply with applicable land use and zoning requirements and there is no known land use plan, policy or regulation that would conflict with the proposed project. Therefore, the project would have a ***less than significant impact***.

XII. MINERAL RESOURCES

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

Responses to Checklist Questions

Responses a), b): The General Plan EIR did not address mineral resources. According to the Davis General Plan, the most important mineral resources in the region are sand and gravel, which are mined on Cache Creek and other channels in Yolo County. A survey of aggregate resources by the State Division of Mines and Geology showed that significant deposits of aggregate resources are not located in the City of Davis Planning Area. The only mineral resource known to exist in the City's Planning area is natural gas; however, specific resource areas have not been identified.[10] Policies within the City's General Plan provide for minimizing resource exploitation.

Based on the lack of mineral resources in the project area, no impact to mineral resources would occur and the proposed project would not result in any new specific effects or effects that are more significant than what was previously analyzed in the General Plan EIR. The proposed project would have ***no impact***.

[10] City of Davis. *City of Davis General Plan* [pg. 290]. Adopted May 2001, Amended through January 2007.

XIII. NOISE

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

General Plan EIR Significance Criteria

The thresholds of significance applied in the General Plan EIR are as follows:

- A significant impact would occur if a policy change in the General Plan update would result in substantial adverse change in the environment related to noise.
- The General Plan was determined to have a significant impact if construction activities could violate provisions of City's Noise Ordinance (Chapter 168, "Noise Regulations" of the City of Davis Municipal Code). Specifically, permitted construction activities between the hours of 7:00 AM and 7:00 PM (Monday through Friday) and 8:00 AM and 8:00 PM (Saturday and Sunday) were considered significant if both of the following measures are exceeded:
    1. No individual piece of equipment shall produce a noise level exceeding 83 A-weighted decibels (dBA) at a distance of 25 feet.
    2. The noise level at any point outside the property plane of the project shall not exceed 86 dBA.
- The General Plan was determined to have a significant impact if the potential development proposed in the plan would substantially increase the exposure of existing noise sensitive land uses to noise in excess of exterior and/or interior noise standards specified in Figure 5F-l, of the General Plan EIR.

FUNDAMENTALS OF ACOUSTICS

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels, but are expressed as dB, unless otherwise noted.

Responses to Checklist Questions

Response a):

The General Plan EIR considered whether buildout of the General Plan would expose noise sensitive land uses to construction or operation related noise in violation of the City's Noise Ordinance. The General Plan EIR concluded that the impact of construction noise and operation in some areas were significant and unavoidable. In concluding that construction and operational noise in some areas would result in significant and unavoidable impacts, the General Plan EIR considered potential impacts resulting from infill development within the City. The proposed project is an infill development similar to the type of development generally analyzed in the General Plan EIR. In addition, the project would be subject to General Plan Policy NOI 1.1 and Policy NOI 2.1, Standard 1.1a through 1.1d, and Action 1.1h through 1.1m (listed at the end of this section). The proposed project would not involve construction-related or operational sources of noise in excess of the sources considered in the General Plan EIR, and, thus, potential impacts related to implementation of the proposed project would not exceed the impacts previously considered by the General Plan EIR.

An Environmental Noise Assessment, dated November 19, 2021, was prepared for the proposed project by Saxelby Acoustics, Inc. and evaluated the potential noise impacts of the proposed project. The following section includes a discussion of the sensitive receptors in the project area, and the potential impacts related to construction and operational noise sources associated with the proposed project. According to the noise report,

> "The Noise Study took measurements of the existing ambient noise level on the project site. According to the noise report, "Saxelby Acoustics conducted a continuous (24-hr.) noise level measurement at one location near the project site. The noise measurement location is shown on Figure 2. A summary of the noise level measurement survey results is provided in Table 2. Appendix B contains the complete results of the noise monitoring.
>
> The sound level meter was programmed to record the maximum, median, and average noise levels during the survey. The maximum value, denoted Lmax, represents the highest noise level measured. The average value, denoted Leq, represents the energy average of all of the noise

received by the sound level meter microphone during the monitoring period. The median value, denoted L50, represents the sound level exceeded 50 percent of the time during the monitoring period.

A Larson Davis Laboratories (LDL) model 812 integrating sound level meter was used for the ambient noise level measurement survey. The meter was calibrated before and after use with a B&K Model 4230 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4)."

TABLE 2: SUMMARY OF EXISTING BACKGROUND NOISE MEASUREMENT DATA

Site	Date	Average Measured Hourly Noise Levels, dBA						
			Daytime (7:00 am - 10:00 pm)			Nighttime (10:00 pm – 7:00 am)		
		CNEL/L_{dn}	L_{eq}	L_{50}	L_{max}	L_{eq}	L_{50}	L_{max}
LT-1	2/4/21	64	62	57	72	57	55	67
Source: Saxelby Acoustics – 2021								

Sensitive receptors to noise include residential areas, schools, churches, nursing homes/senior housing, hospitals, libraries, and childcare facilities. The nearest sensitive receptors are the adjacent multifamily residential apartments located approximately east of the project site with the nearest apartment building approximately 70 feet from the project property boundary.

Construction Noise. Construction activities have the potential to create temporary or periodic increases in ambient noise levels in the project vicinity above levels existing without the project. During the construction of the project noise from construction activities would add to the noise environment in the project vicinity. Existing sensitive receptors include nearby apartment residents, motel and other commercial uses.

Noise would also be generated during the construction phase by increased truck traffic on area roadways. A significant project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from construction sites. This noise increase would be of short duration and would likely occur primarily during daytime hours.
Construction could result in periods of elevated ambient noise levels and the potential for annoyance. However, as pointed out in the Noise Assessment report, the City of Davis Noise Ordinance (Section 24.02.040, Special provisions) exempts certain typical activities, which may occur within the City, including allowable hours of operation and noise limits for construction activities as follows, which apply to the proposed project. The applicable excerpt is as follows:

"(a) Power tools. The operation of power tools for noncommercial purposes shall be exempt from the provisions of Sections 24.02.020(a), (b), (c) and 24.02.030, between the hours of 8:00 a.m. and 8:00 p.m.; provided, that such operations shall be subject to the provisions of Section 24.05.010. For purposes of this section, a noncommercial use shall be a use for which a business license is not required pursuant to Chapter 19.

(b) Construction and landscape maintenance equipment. Notwithstanding any other provision of this chapter, between the hours of 7:00 a.m. and 7:00 p.m. on Mondays through Fridays, and between the hours of 8:00 a.m. and 8:00 p.m. on Saturdays and Sundays, construction,

alteration, repair or maintenance activities which are authorized by valid city permit or business license, or carried out by employees of contractors of the city shall be allowed if they meet at least one of the following noise limitations:

(1) No individual piece of equipment shall produce a noise level exceeding eighty-three dBA at a distance of twenty-five feet. If the device is housed within a structure on the property, the measurement shall be made outside the structure at a distance as close to twenty feet from the equipment as possible.

(2) The noise level at any point outside of the property plane of the project shall not exceed eighty-six dBA.

(3) The provisions of subdivisions (1) and (2) of this subsection shall not be applicable to impact tools and equipment; provided, that such impact tools and equipment shall have intake and exhaust mufflers recommended by manufacturers thereof and approved by the director of public works as best accomplishing maximum noise attenuation, and that pavement breakers and jackhammers shall also be equipped with acoustically attenuating shields or shrouds recommended by the manufacturers thereof and approved by the director of public works as best accomplishing maximum noise attenuation. In the absence of manufacturer's recommendations, the director of public works may prescribe such means of accomplishing maximum noise attenuation as he/she may determine to be in the public interest.
Construction projects located more than two hundred feet from existing homes may request a special use permit to begin work at six a.m. on weekdays from June 15th until September 1st. No percussion type tools (such as ramsets or jackhammers) can be used before 7:00 a.m. The permit shall be revoked if any noise complaint is received by the police department.

(4) No individual powered blower shall produce a noise level exceeding seventy dBA measured at a distance of fifty feet.

(5) No powered blower shall be operated within one hundred feet radius of another powered blower simultaneously.

(6) On single-family residential property, the seventy dBA at fifty feet restriction shall not apply if operated for less than ten minutes per occurrence."

The proposed project construction activities will be subject to the requirements of Section 24.02.040 of the City of Davis Municipal Code cited herein, therefore, this impact would be ***less than significant***.

Operational Noise. Operational noise would include traffic noise and noise from on-site activities. The proposal to intensify the conditional allowable uses on the subject site is not anticipated to generate substantive operational noise to warrant further studies. However, a noise analysis was prepared for the proposed project by Saxelby Acoustics, LLC, dated November 19, 2021, which states:

"The HVAC units on the convenience store and retail space roof, vehicle traffic in the gas station parking lot/fueling area, truck deliveries, car wash air blower dryers, and vacuum stations are considered to be the primary noise sources for this project. This analysis considers each of these primary noise sources along with vehicle circulation on the project site.

Based upon the datasheet for the Mark VII dryer system, the noise emissions from the proposed car wash dryers are expected to be 72 dB at a distance of 50 feet, from the exit end of the car

wash and 71 dB at 50 feet from the entrance. These sound levels are based upon continuous operation. However, typically the dryers would operate no longer than 60 seconds per cycles with a maximum of approximately 13 cycles during a busy hour. Therefore, the dryers are predicted to operate for a maximum period of 13 minutes or 780 seconds in a busy hour. In order to calculate the hourly average (Leq) sound level resulting from a peak hour of operation, the following equation can be used.

Leq = SPL + 10 * (log Neq) - 35.6, dB where:

SPL is the steady sound pressure level of the dryers (72 dB or 71 dB), and 10 * (log Neq) is 10 times the logarithm of the number seconds per hour that the dryers could operate (780s), and 35.6 is 10 times the logarithm of the number seconds in an hour.

Based upon this equation, the car wash is predicted to generate average sound levels of 65.3 dB at a distance of 50 feet from the exit end of the car wash and 64.3 dB at a distance of 50 feet from the entrance of the car wash. The Lmax value associated with operation of the car wash is expected to be no more than 10 dBA higher than the Leq."

The noise analysis indicates that the proposed project will comply with the City of Davis noise ordinance nighttime (9 PM to 7 AM) noise level standard of 70 dBA Lmax, daytime (7 AM to 9 PM) noise level standard of 75 dBA Lmax, and General Plan noise level standard of 60 dBA Ldn at the nearest sensitive receptors, assuming a 6-foot tall sound wall is constructed on the property boundary as indicated on Figures *B, C and D below.

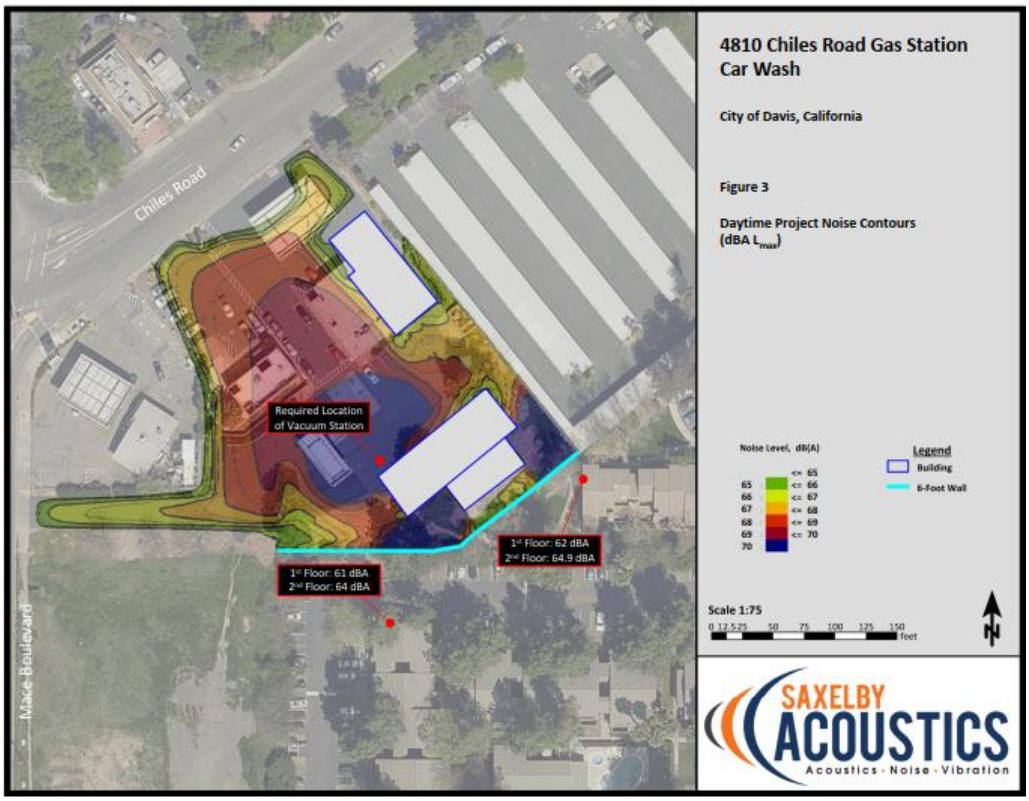

Figure 8A: Daytime Project Noise Contours

Figure 8B: Nighttime Project Noise Contours

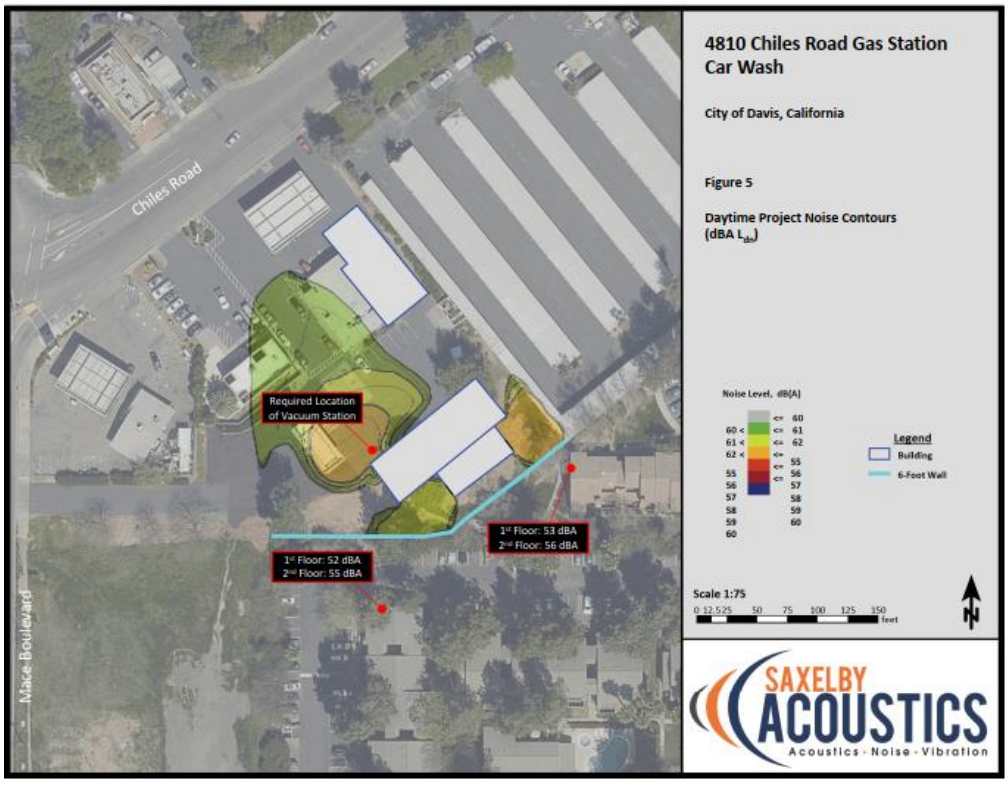

Figure 8C: Daytime Project Noise Contours

The noise report, thus, concludes that project will comply with the City of Davis noise ordinance based on the following assumptions:

- The car wash dryer used for the project shall not exceed a continuous noise level of 72 dBA at 50 feet outside the car wash tunnel entrance or exit.
- Car wash blowers to be located at least 10 feet from tunnel exit. Tunnel to be acoustically lined on ceiling and 5' down on side walls extending from tunnel exit for a distance of 20-feet inside the tunnel. Acoustic lining shall consist of Sonex Clean Baffles, or panel with equivalent acoustic performance.
- The vacuum station shall not exceed a noise level of 64 dBA Leq at 25 feet.
- The car wash and associated vacuum station should operate only during daytime (7 AM to 9 PM) hours.

A recommended project approval condition requires installation of a 6' high sound wall as shown on Figure 8C above, which is also proposed as part of the project improvements. Thus, operational noise impacts associated with implementation of the proposed project would be ***less than significant***.

Response b): Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration will depend on their individual sensitivity to vibration, the amplitude and frequency of the source and the response of the system that is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities in inches per second. Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities.

Human and structural response to different vibration levels is influenced by several factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. The table below indicates that the threshold for damage to structures ranges from 0.2 to 0.6 peak particle velocity in inches per second (in/sec p.p.v). One-half this minimum threshold or 0.1 in/sec p.p.v. is considered a safe criterion that would protect against architectural or structural damage. The general threshold at which human annoyance could occur is noted as 0.1 in/sec p.p.v.

EFFECTS OF VIBRATION ON PEOPLE AND BUILDINGS			
Peak Particle Velocity		***Human Reaction***	***Effect on Buildings***
mm/sec.	***in./sec.***		
0.15-0.30	0.006-0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type

2.0	0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
2.5	0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural" damage to normal buildings
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of "architectural" damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage
10-15	0.4-0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage.

Figure 8D: Effects of Vibration on People & Buildings Table

SOURCE: CALTRANS. TRANSPORTATION RELATED EARTHBORN VIBRATIONS. TAV-02-01-R9601 FEBRUARY 20, 2002.

The vibration-generating activities typically happen during construction when activities such as grading, utilities placement, and road construction occur. Construction activities would be temporary in nature and would likely occur during normal daytime working hours. It is not anticipated that construction related vibration impacts would be significant to warrant further studies.
Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural. The table below shows the typical vibration levels produced by construction equipment.

Vibration Levels for Varying Construction Equipment		
Type of Equipment	***Peak Particle Velocity @ 25 feet (inches/second)***	***Peak Particle Velocity @ 100 feet (inches/second)***
Large Bulldozer	0.089	0.011
Loaded Trucks	0.076	0.010
Small Bulldozer	0.003	0.000
Auger/drill Rigs	0.089	0.011
Jackhammer	0.035	0.004
Vibratory Hammer	0.070	0.009
Vibratory Compactor/roller	0.210	0.026

Figure 8F: Vibration Levels for Varying Construction Equipment Table

SOURCE: FEDERAL TRANSIT ADMINISTRATION, TRANSIT NOISE AND VIBRATION IMPACT ASSESSMENT GUIDELINES, MAY 2006

Based on the data in the table above, construction vibration levels anticipated for the proposed project are less than the 0.1 in/sec criteria at distances of 50 feet given anticipated construction equipment to be used. Therefore, construction vibrations are not predicted to cause damage to existing buildings or cause annoyance to sensitive receptors. Implementation of the proposed project would have a ***less than significant*** impact relative to this environmental topic.

Response c): The project site is not located near an existing airport and is not within an existing airport land use plan. The nearest airport, UC Davis Airport, is a private airfield located approximately 5.9 miles east of the project site. The proposed project would, therefore, not expose people residing or working in the project area to excessive noise levels associated with such airport facilities. Implementation of the proposed project would have ***no impact*** relative to this topic.

XIV. POPULATION AND HOUSING

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

Responses to Checklist Questions

General Plan EIR Significance Criteria

The General Plan EIR did not include any specific thresholds related to population and housing. However, analysis of potential impacts related to population and housing was presented in Chapter 7, Cumulative Impacts and Other CEQA-Required Analyses, of the General Plan EIR.

Response a): According to the California State Department of Finance, January 1, 2021, population estimates, Davis population is estimated to be 69,295 people. The proposed project would result in the demolition and replacement of existing gas station, convenience store and restaurant structures and their replacement with a new gas station, convenience store, restaurant, office and car wash structures. It is an intensification of conditionally permitted uses on the subject property consistent with City land use policies. The proposed project would not include upsizing of offsite infrastructure or roadways. Implementation of the proposed project would not induce substantial population growth in the city, either directly or indirectly. The intent of the intensification is to serve existing needs in the City of Davis. Therefore, Implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

Response b): The project site is currently developed with conditionally permitted uses. The proposed project continues to request approval of similar uses and other conditional permitted uses. Implementation of the proposed project would not result in displacement of substantial numbers of existing people or housing, or necessitate the construction of replacement housing elsewhere. There are ***no impact.***

XV. PUBLIC SERVICES

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?			X	
Police protection?			X	
Schools?				X
Parks?				X
Other public facilities?			X	

Responses to Checklist Questions

General Plan EIR Significance Criteria

The thresholds of significance applied in the General Plan EIR are as follows:

- A significant impact would occur if a policy change in the General Plan update would result in substantial adverse change in the environment related to public services and utilities.
- The General Plan was determined to have a significant impact if development would cause a substantive increase in demand for law enforcement services that cannot be responded to by existing plans or General Plan policies.
- The General Plan was determined to have a significant impact if development would cause a substantive increase in demand for fire protection services that cannot be responded to by existing plans or General Plan policies.
- The General Plan was determined to have a significant impact if implementation of the plan would require the need for additional fire protection infrastructure (other than improvements already planned) in order to maintain acceptable levels of service (as measured by response time).
- The General Plan was determined to have a significant impact if development would require a substantive expansion of the existing school system that could not be mitigated by plan policies and/or state mandates.
- The General Plan was determined to have a significant impact if development would require substantive expansion of the existing library system and such expansion cannot be provided through existing plans and/or general plan policies.

The General Plan was determined to have a significant impact if development would require substantive expansion of the existing park and recreation facilities that cannot be responded to by existing plans or General Plan policies.

Response a): The General Plan EIR concluded that Policy POLFIRE 3.2 was sufficient to ensure that impacts related to the provision of fire protection services would not be impacted by buildout of the City's General Plan. Policy POLFIRE 3.2 requires that all new development includes provision of fire protection services. As discussed in the project-specific analysis section below, the proposed project complies with POLFIRE 3.2. Consequently, the proposed project would not result in any new

specific effects or effects that are more significant than what was already analyzed in the General Plan EIR.

The City of Davis is served by the Davis Fire Department and the Davis Police Department, and includes 27 public and private schools as well as approximately 20 parks, and public facilities such as City Hall and community buildings.

Fire Protection. The project site is currently located within the jurisdiction of the Davis Fire Department. The City of Davis Fire Department responds to incidents including, but not limited to, medical emergencies, fires, hazardous materials conditions, technical rescues, and public assistance.

The Department has contractual agreements with the East Davis County Fire Protection District, the Springlake Fire Protection District, and the No Man's Land Fire Protection District to provide emergency response to these areas. The City is divided into three emergency first-response areas, which provide clearly defined territories for dispatching the nearest fire and EMS personnel and equipment to an emergency. In addition, the Department has an automatic aid agreement with UC Davis, the cities of Woodland, West Sacramento, and Dixon and a mutual aid agreement with all other fire protection agencies in Yolo County and in the State of California.
The Davis Fire Department currently operates three fire stations within the City of Davis:

- Station 31, located at 530 Fifth Street;
- Station 32, located at 1350 Arlington Boulevard; and
- Station 33, located at 425 Mace Boulevard.

Station 33, located in close proximity of the project site. In 2018, the total number of emergency incidents responded to by the Davis Fire Department was 5447. Currently, the City of Davis Fire Department is staffed by 36 shift personnel (nine captains and 27 firefighters). The shift personnel are divided into three shifts, with each shift working a 24-hour workday. Department apparatus inventory consists of three engines, two squads, two grass/wildland units, one water tender, two reserve engines, three command vehicles, two fire prevention staff vehicles, and two antique fire apparatus. The Davis Fire Department does not have a ladder truck. For all incidents in the City of Davis requiring the response of a ladder truck, Truck 34 from the UC Davis Fire Department is dispatched to assist. Below is the summary information provided for the department in the City of Davis adopted Budget FY-2021-2023.

Fire Protection			
Fire Population Served (2018)	68,740	Fire Area Served	133 sq. miles
Stations	3	Calls for Service (2020):	
Firefighters and Officers (authorized)	39	Fire Calls	240
Chief Officers	5	Medical Calls	3,312
Fire Insurance Protection Rating	Class 2	Other Emergencies	2,311
Fire Inspections Conducted (2020)	191		

Figure 9: Fire Protection Data

The City relies on a total response time goal of responding to calls for service within 6:00 minutes for EMS calls and 6:20 minutes for fire calls, 90 percent of the time, consistent with the National Fire Protection Agency (NFPA) 1710. The 6:20 minute response time goal for fire calls and NFPA 1710 were adopted by City Council in January 2013.

The proposed project would not add people to the City of Davis population. The proposed project will result in intensification of land use (i.e., density for the parcel), or the addition of structures that are consistent with South Davis Specific Plan and the General Plan. The proposed project would not result in additional substantive demand for fire protection as an infill project. Implementation of the proposed project would not require additional demands for fire protection services from the City of Davis Fire Department as the proposed project is an infill redevelopment supportive of City's goals. Therefore, implementation of the proposed project will have a ***less than significant*** impact relative to this topic.

The proposed project would not result in a need to construct a new fire station or physically alter an existing fire station. The Fire Department would receive development impact fees from the project for capital improvements and infrastructure costs although a new facility would not be created. The fair share funds are intended to pay for project financial impacts on fire protection service. The proposed project's environmental impact to fire service is considered ***less than significant***.

Police Protection. The Davis Police Department (DPD) is located at 2600 Fifth Street, approximately 2.3 miles northwest of the project site. The DPD is a municipal law enforcement agency, currently staffed with 61 sworn police officers, 34 civilian support professionals, and over 40 volunteers.10 The DPD provides professional law enforcement, maintenance of public order and safety, crime prevention planning, and coordination services that contribute to discouraging criminal behavior and enhancing community livability and sustainability.

The DPD is organized into the following four Divisions:

- Administration Division: The Administration Division provides overall management, planning, coordination and evaluation of department functions.
- Patrol Division: The Patrol Division provides first-line emergency response to crimes in progress, accidents, and tactical situations.
- Investigations Division: The Investigations Division handles major criminal investigations of all types involving adult and juvenile offenders, as well as missing persons of all ages.
- Records & Communications Division: The Records & Communications Division is the hub of the department, which receives all Emergency 911 and nonemergency calls for service and ensures that appropriate resources are dispatched in a timely manner.

Sworn officers perform law enforcement tasks, as well as administration and supervision, and civilian personnel are involved in administration, support services, supervision, dispatch, parking enforcement, and community service duties. UC Davis also maintains an on-campus police department that has a mutual aid agreement with the City for major incidents. Below is the summary information provided for the department in the City of Davis adopted Budget FY-2021-2023.

Police Protection			
Stations	1	Driving Under Influence Arrests	61
Sworn Personnel	61	Warrants Processed	859
Property Loss	$3,662,596	Animal-related Calls	522
Property Recovered	$718,335	Citizen Complaints	13
Calls for Service	44,138*	Noise Complaints	1,069
911 Calls	18,202	Cases Written	5,534
Parking	9,623	Moving Violations	1,172
Part 1 Offenses (homicide, rape, robbery, aggravated assault, burglary, larceny, motor vehicle theft, arson)			2,301

Figure 10: Police Protection Data

The proposed project would not add to the City of Davis population. The existing single-family would remain. The proposed project will not result in significant intensification of land use (i.e., density), although there will be addition of structures, but not new uses that would differ from the current General Plan and South Davis Specific Plan land uses. No significant additional demand for police protection will be created by the project. Implementation of the proposed project would not require additional demands for police protection services from the City of Davis Police Department. Therefore, implementation of the proposed project will have ***less than significant impact***.

The proposed project would not result in a need to construct a new police station or physically alter an existing police station. The City's development impact fees for capital improvements and infrastructure costs would be collected. The fair share funds are intended to pay for project financial impacts on police protection service. The proposed project's environmental impact to police service is considered ***less than significant***.

The project would not directly introduce new residents to the City, but would not substantially increase demand forschools, or public park facilities to the extent that modification of existing facilities or construction of new park or school facilities would be necessary. As such, the proposed project would have a ***less than significant*** impact relative to this topic.

Schools. The proposed project is located within the service boundaries of the Davis Joint Unified School District (DJUSD). The DJUSD covers an area of 126 square miles and employs approximately 1,000 people. The district maintains eight (8) standard elementary schools, one (1) "magnet" elementary school (César Chávez), three (3) junior high schools, one (1) comprehensive high school, one "magnet" high school, one School for Independent Study, and one continuation school. The proposed project is a commercial development on a commercially-zoned site and does not include any residential units and would not result in any increase to the student population in the area. The proposed project will result in the development of a vacant parcel, but the proposed project is consistent with the current General Plan land use and policies and would not result in the need for new school facilities. Therefore, the proposed project would have *no impact* relative to school facilities.

Parks. The proposed project will result in the development of a vacant infill parcel for a commercial use (express car wash). It does not include any residential units or result in any increase in the population of the City. It would include approximately 4 employees on-site, but

does not involve the need for the use of any parks. Additionally, the proposed land use is consistent with the current General Plan and the proposed project would not significantly increase the use of existing park facilities. Therefore, the proposed project would have *no impact* relative to park facilities.

Other Public Facilities. The proposed project would not result in a need for other public facilities that are not addressed in the Utilities and Service Section. The proposed project does not trigger the need for new facilities associated with other public services. The proposed project will result in minor intensification of land uses that are consistent with the zoning, specific plan and general plan land uses. Consequently, no new facilities or other public services are warranted. Implementation of the proposed project would have a *less than significant* impact relative to this issue.

XVI. RECREATION

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*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?			X	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	

Responses to Checklist Questions

General Plan EIR Significance Criteria

The thresholds of significance applied in the General Plan EIR are as follows:

- A significant impact would occur if a policy change in the General Plan update would result in substantial adverse change in the environment related to public services and utilities.
- The General Plan was determined to have a significant impact if development would require substantive expansion of the existing park and recreation facilities that cannot be responded to by existing plans or General Plan policies.

Responses a - b): The proposed land uses are consistent with the current General Plan land use and zoning for the site. The proposed project will not result in increased use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Furthermore, it is not anticipated that any substantial physical deterioration of existing facilities would occur, or be accelerated as a result of implementation of the proposed project. As discussed in Section XV, Public Services, of this document, the proposed project would not substantially increase demand for parks or facilities and would not affect any recreational opportunities.

As noted in the Parks and Recreational Facilities Master Plan, the park system in the City of Davis provides residents with more than 475 acres of neighborhood and community parks, special use facilities, and greenbelts.

The proposed project does not include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment. Implementation of the proposed project would have a ***less than significant*** impact relative to recreation.

XVII. TRANSPORTATION

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

Responses to Checklist Questions

General Plan EIR Significance Criteria

The thresholds of significance applied in the General Plan EIR are as follows:

- A significant impact would occur if a policy change in the General Plan update would result in substantial adverse change in the environment related to traffic and.
- A significant impact would occur if policies proposed were not in compliance with the Congestion Management Plan adopted by Yolo County.
- The General Plan was determined to have a significant impact if the alternative exceeded standards contained in the General Plan update as stated in Standard MOB 0.2. In general, a significant impact on roadway segments will occur if average daily trip (ADT) volumes reach LOS F in roadways outside the City's core area.
- The General Plan was determined to have a significant impact on bicyclists and pedestrians if the alternative would conflict with any plans or programs that support alternative forms of transportation or would lead to increases in accidents with vehicles.
- The General Plan was determined to have a significant impact on transit services if the alternative would conflict with any plans or programs that support alternative forms of transportation.
- The General Plan would require expansion of transit services that are not convenient or efficient for transit providers.
- The General Plan was determined to have a significant impact on rail and or air service if the alternative would conflict with the development of any future rail facilities and or the operation of any existing rail or air service facilities within the planning area (not applicable to the proposed project).

Because of Senate Bill (SB) 743, the transportation impact analysis presented in this section is based primarily on the Transportation Study prepared for this project by Fehr & Peers.

Senate Bill 743

In 2013, the Legislature passed legislation with the intention of ultimately doing away with level of service (LOS) in most instances as a basis for environmental analysis under CEQA. The SB 743

required the Governor's Office of Planning and Research (OPR) to develop new State CEQA guidelines that address traffic metrics under CEQA. As stated in the legislation, upon adoption of the new guidelines,

> "automobile delay, as described solely by level of service (LOS) or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the guidelines, if any."

In addition, SB 743 enacted under Public Resources Code (PRC), Subdivision (b)(2) of Section 21099 further provides that

> "[u]pon certification of the guidelines by the Secretary of the Natural Resources Agency pursuant to this section, automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion *shall not be considered a significant impact on the environment* pursuant to [CEQA], except in locations specifically identified in the guidelines, if any." (Italics and yellow emphasis added.)

Pursuant to SB 743, the Natural Resources Agency promulgated CEQA Guidelines Section 15064.3 in late 2018. It became effective in early 2019. Subdivision (a) of that section provides that

> "[g]enerally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in subdivision (b)(2) below (regarding roadway capacity), a project's effect on automobile delay shall not constitute a significant environmental impact."[11]

The OPR Technical Advisory states that lead agencies may screen out vehicle miles traveled (VMT) using project size, maps, transit availability, and provision of affordable housing. Many agencies use these screening thresholds to identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study. The proposed project is found to qualify as a local-serving retail project based on the definitions provided in the OPR Technical Advisory, and will cause a less-than-significant impact, although a *Transportation Study* was prepared for it.

Chiles Plaza vs. Other Projects. The *Transportation Study* dated May 25, 2022, prepared by Fehr & Peers for this project does not include the discussion of other proposed or ongoing projects within the vicinity of the project. These other projects include 4480 Chiles Road (Gas & Shop), DiSC 2022, and 480 Mace Boulevard (Davis Express Car Wash).

Again, Senate Bill (SB) 743 states that a project's effect on automobile delay shall not constitute a significant environmental impact.

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[11] Subdivision (b)(2) of section 15064.3 ("transportation projects") provides that "[t]ransportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152."

Transportation Study. A May 25, 2022, *Transportation Study* prepared by Fehr and Peers, updated the November 18, 2021, study that analyzed the project's transportation impacts, site access, and on-site circulation. It evaluated the operations at nearby intersections.

Adjacent roads include Chiles Road and Mace Boulevard. The project site will have vehicle access from Mace Boulevard via a right-in driveway and from Chiles Road via a full access driveway.

Roadways near the project site are Chiles Road, two lanes, and Mace Boulevard, four lanes. Both roads have posted speed limit of 35 miles per hour.

The site is currently occupied by a gas station with 14 vehicle fueling positions (12 gas and 2 truck fueling positions), a convenience store, and a Subway restaurant. The site is currently accessible from Mace Boulevard via a right-in/right-out driveway and from Chiles Road via three full access driveways.

The Interstate 80 (I-80)/Mace Boulevard interchange is located a short distance north of the project site. The interchange includes on- and off-ramps for both eastbound and westbound travel on I-80.

As noted in the *Transportation Study*, bus stops are located on both sides of Chiles Road along the project frontage. The bus stops are served by Unitrans Routes A and T and Yolobus Routes 42A, 42B, 44, and 232. Yolobus utilizes the eastbound stop as a layover/recovery location for its intercity routes. There are sidewalks on both sides of Chiles Road and Mace Boulevard. Class II bike lanes are provided in both directions on Chiles Road and Mace Boulevard. The westbound Chiles Road bike lane ends approximately 340 feet east of the Mace Boulevard/Chiles Road intersection. The study, however, has the following recommendations that the project proponent and staff has agreed to have as conditions of approval:

- Install a raised median on Chiles Road east of Mace Boulevard to reduce conflicts involving vehicles turning left in and out of the Chiles Road west project driveway. This modification would convert the driveway from full access to right-in/right-out only. The median should extend at least 100 feet east on Chiles Road. Install accompanying "No Left Turn" signage and pavement markings for outbound traffic at the Chiles Road west project driveway.
- Install a two-way left-turn lane on Chiles Road to accommodate left-turns in and out of the Chiles Road east project driveway. In order to serve the project site and other adjacent existing Chiles Road uses, the two-way left-turn lane should begin at the back of the striping for the westbound left-turn pocket at the Mace Boulevard/Chiles Road intersection (immediately east of the raised median recommended above) and extend at least to the eastern edge of the South Davis Storage site. Extension of the two-way left-turn lane to the Chiles Road/El Cemonte Avenue intersection would provide a uniform street cross-section and eliminate the need for a midblock transition. This recommendation would require restriping of Chiles Road between Mace Boulevard and El Cemonte Avenue, including the removal of on-street parking on one or both sides of Chiles Road (depending on the desired lane widths and expected users). The resulting Chiles Road cross-section would include the two-way left-turn lane in addition to a vehicle travel lane and a Class II bike lane in each direction. If on-street parking can be preserved on one side of Chiles Road with this cross-section, it is recommended that it be preserved on the north side. Additionally, coordination should occur with relevant transit operators to determine the extent to which this modification would affect transit operations, particularly for Yolobus layover activities.

- Install separate outbound left-turn and right-turn lanes and accompanying signage/pavement markings at the Chiles Road east project driveway to accommodate outbound vehicle queues. The project site plan indicates that this driveway would have a width of approximately 35 feet. Additional width may be required to accommodate a single inbound lane and two outbound lanes depending on the anticipated design vehicle that would utilize this driveway.
- Modify the northbound channelized right-turn lane at Mace Boulevard/Chiles Road to reduce vehicle travel speeds and reduce potential conflicts between vehicles exiting the project site and eastbound traffic on Chiles Road (originating from the northbound channelized right-turn lane). Potential modifications include a) removing and replacing the lane with a standard right-turn lane, b) retrofitting the lane to reduce vehicle speeds and increase yield compliance rates (e.g., reduce turning radius, construct vertical traffic calming element within the turn lane, etc.), c) installing signage and pavement markings, d) relocating the western project site driveway further to the east to increase reaction time between eastbound motorists and motorists turning right out of the project site, or e) a modification of equal effectiveness as determined by the City of Davis Public Works Department.

The above recommendations would alter access for the project site and for the existing Sinclair gas station immediately west of the project site. The Sinclair gas station currently includes a full access driveway on Chiles Road immediately east of Mace Boulevard.

The City of Davis and County of Yolo are currently engaged in the Mace Boulevard Corridor Project to address mobility challenges on that roadway, but that exact improvements have not been determined.

Response a): The proposed project will have no conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. A *Transportation Study* prepared for this project found no conflict.

The subject site is currently accessed from Mace Boulevard via right-in / right-out driveway, and from Chiles Road via full access driveways. Chiles Road is two lanes, while Mace Boulevard is four lanes. The Mace Boulevard/Chiles Road intersection is signalized and includes channelized right-turn lanes in the northbound, southbound, and eastbound directions. The Interstate 80 (I-80)/Mace Boulevard interchange is located a short distance north of the subject site, which includes on- and off-ramps east- and westbound travel on I-80.

However, the study has recommendations for improvements that will facilitate improved circulation system within the project area, which are included as conditions of approval of the project applications. Below is an aerial rendering showing the recommended improvements.

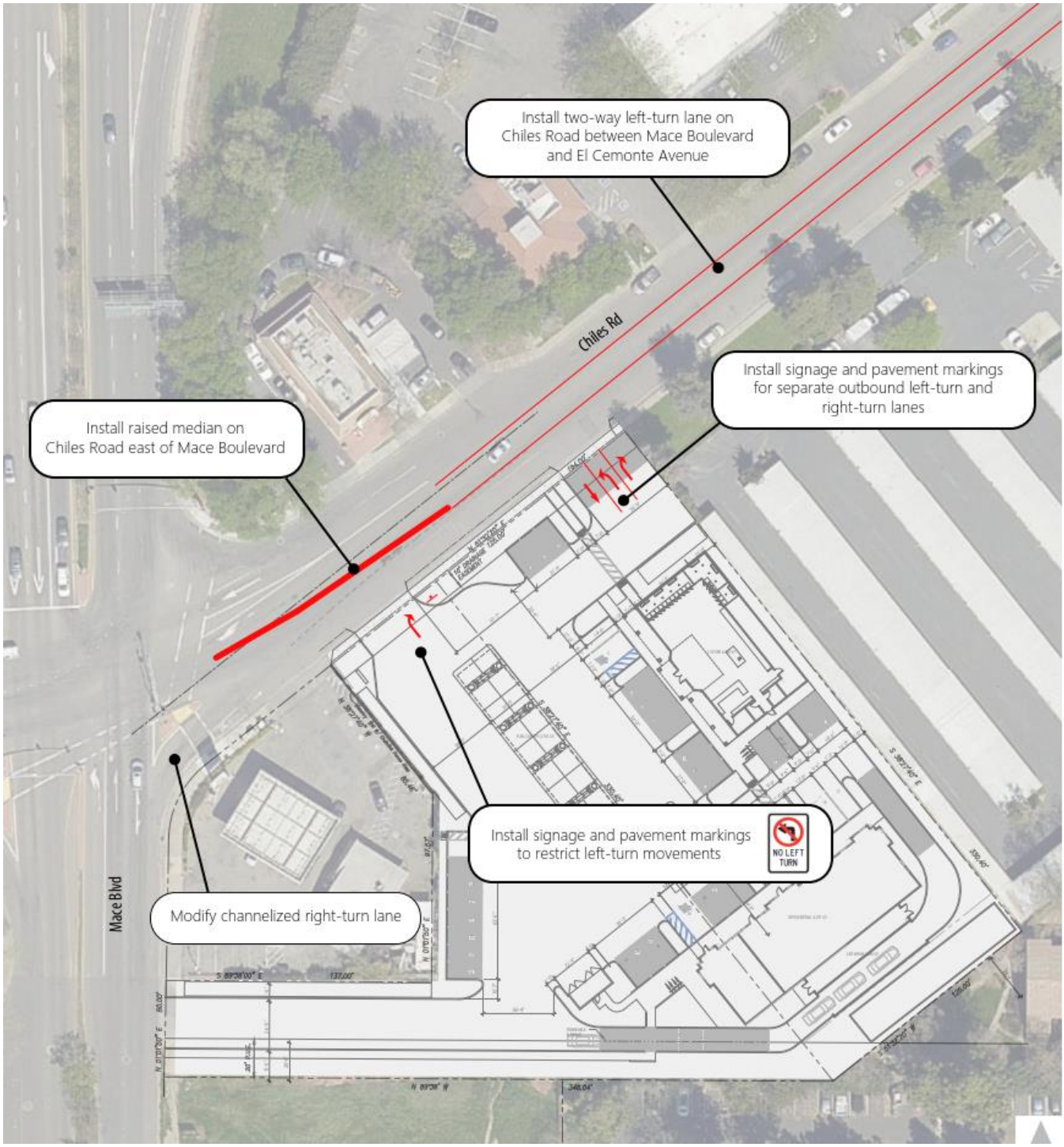


Figure 12: Recommended Site Access Improvements Exhibit

The traffic memo states:

> "The recommendations provided above would alter access for the project site as well as for the existing Sinclair gas station immediately west of the project site. The Sinclair gas station currently includes a full access driveway on Chiles Road immediately east of Mace Boulevard. The implementation of the recommendations above would prevent left-turns in and out of this driveway. Thus, vehicles traveling to the Sinclair gas station from westbound Chiles Road would

> require an alternate route. One likely route would be use of the project site itself, by entering the Chiles Road east project driveway, circulating through the project site, exiting the Mace Boulevard project driveway, and entering the Sinclair driveway on Mace Boulevard. Given this likely behavior, it may be desirable to modify the project site to provide alternate accommodations for westbound Chiles Road traffic traveling to the Sinclair gas station. One potential solution could be to extend the internal east-west drive aisle into the Sinclair gas station site."

In addition, the study analyzed the proposed project's internal circulation and driveways' accesses. Based on the findings, the identified roadways modification improvements that address and further reduce impacts will result in a ***less than significant*** impact.

Response b): The proposed project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). State CEQA Guidelines Section 15064.3 was added on December 28, 2018, to address the determination of significance for transportation impacts, which requires VMT as the basis of transportation analysis instead of congestion (such as LOS). The change in the focus of transportation analysis is intended to shift the focus from congestion to, among other things, reduction in greenhouse gas emissions, encouraging mixed-use development, and other factors. State CEQA Guidelines Section 15064.3(b) identifies criteria for analyzing the transportation impacts of a project.

Vehicle-miles-traveled (VM) is considered a useful metric in understanding how a project can affect the efficiency of the transportation system. By definition, one VMT occurs when a vehicle is driven one mile. In addition, a given VMT value represents vehicular miles of travel for entire weekday. The November 18, 2021, Fehr and Peers traffic memo states as follows:

> "The project would be an infill project that would entail the redevelopment of existing gas station and retail commercial uses on the project site. The project would result in a net decrease of gas station fueling positions by 2 gas fueling positions and 2 truck fueling positions. Additionally, the project would result in a net increase in commercial space by 3,600 square feet and the addition of a car wash. The project commercial uses would be predominantly retail in nature. In accordance with the OPR Technical Advisory, the project would satisfy the local-serving retail VMT screening criteria by virtue of the nature and size of the project (predominantly retail development less than 50,000 square feet in size). Therefore, the project is assumed to have a less than significant impact on VMT since it satisfies one or more of the VMT screening criteria identified in the OPR Technical Advisory. No quantitative VMT analysis or associated mitigation measures are required."

The proposed project is an expansion of existing land uses plus addition of office spaces. The demolition of existing structures and construction of the replacement structures are temporary. The nature of the proposed uses will not change substantially from what currently exist on the subject site (operationally), and while the traffic trip generation will increase, but the study did not find it be significant to warrant an environmental impact report. Details analysis is provided in the traffic study report, and appropriate recommendations cited above to mitigate any impacts to a less than significant level have been made part of the recommended conditions of approval. As such, impacts are considered ***less than significant*** relative to this topic.

Responses c), d): The proposed project will not result in inadequate emergency access. During demolition and construction phases, the project proponent will be required to obtain appropriate permits to address traffic issues, which will be temporary. The recommendations in the study address potential access and circulation issues identified. The implementation of the recommendations will reduce any impacts to ***less than significant*** relative to this topic.

The areas of improvements recommended can be summarized as follows:

- Install a raised median on Chiles Road east of Mace Boulevard.
- Install a two-way left-turn lane on Chiles Road east of Mace Boulevard.
- Install separate outbound left-turn and right-turn lanes and accompanying signage/pavement markings at the Chiles Road east project driveway.
- Modify the northbound channelized right-turn lane at the Mace Boulevard/Chiles Road intersection to reduce vehicle travel speeds.

XVIII. TRIBAL CULTURAL RESOURCES

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

Responses to Checklist Questions

General Plan EIR Significance Criteria

At the time of preparation of the analysis of the General Plan EIR, CEQA did not require the separate analysis of tribal cultural resources. The General Plan EIR includes analysis of cultural resources, including archaeological resources and resources related to Native Americans in the area, but the General Plan EIR does not specifically analyze impacts related to tribal cultural resources, nor are any specific thresholds of significance included in the General Plan EIR related to tribal cultural resources.

Responses a.i), a.ii): The City initiated tribal consultation in accordance with Assembly Bill (AB) 52 on October 7, 2021. We received the letter below (Figure 9) on October 11, 2021. The letter states that there are no known cultural resources near the project, and a cultural monitor is not needed. In addition, the letter recommends a cultural sensitivity training for any pre-project personnel as a condition of approval. Already, the City has adopted this recommendation as a standard condition of approval, which will be applied to the project.

The property has not been identified as a significant historical resource and is not designated as a historical resource in the Davis Register, or at state and federal levels. Based on known historical and archaeological resources in the region, there is the potential for undocumented underground cultural resources to exist. The City standard General Plan mitigation measure requires all projects involving excavation to stop construction activities if archaeological resources are discovered and the appropriate consultation effected. Any impacts can be ***mitigated to less than significant*** as a result.

YOCHA DEHE
CULTURAL RESOURCES

October 11, 2021

City of Davis
Attn: Ike Njoku, Planner & Historical Resources Manager
23 Russell Boulevard
Suite #2
Davis, CA 95616

RE: 4810 Chiles Rd Davis Project YD-10072021-03

Dear Ike Njoku:

Thank you for your project notification dated, October 7, 2021, regarding cultural information on or near the proposed 4810 Chiles Rd Davis Project. We appreciate your effort to contact us and wish to respond.

The Cultural Resources Department has reviewed the project and concluded that it is within the aboriginal territories of the Yocha Dehe Wintun Nation. Therefore, we have a cultural interest and authority in the proposed project area.

Based on the information provided, Yocha Dehe Wintun Nation is not aware of any known cultural resources near this project site and a cultural monitor is not needed. However, we recommend cultural sensitivity training for any pre-project personnel to be added to the permit as a condition of approval.

To schedule cultural sensitivity training, prior to the start of the project, please contact:

CRD Administrative Staff
Yocha Dehe Wintun Nation
Office: (530) 796-3400
Email: THPO@yochadehe-nsn.gov

Please refer to identification number YD – 10072021-03 in correspondence concerning this project.

Thank you for providing us the opportunity to comment.

Sincerely,

DocuSigned by:
5ED632FDB9C34EA...
Tribal Historic Preservation Officer

Yocha Dehe Wintun Nation
PO Box 18 Brooks, California 95606 p) 530.796.3400 f) 530.796.2143 www.yochadehe.org

Figure 13: YOCHA DEHE Letter

XIX. UTILITIES AND SERVICE SYSTEMS

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Require or result in the relocation or construction of new or expanded water, wastewater or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the projects projected demand in addition to the providers existing commitments?			X	
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

Responses to Checklist Questions

General Plan EIR Significance Criteria

The thresholds of significance applied in the General Plan EIR are as follows:

- A significant impact would occur if a policy change in the General Plan update would result in substantial adverse change in the environment related to public services and utilities.
- The General Plan was determined to have a significant impact if development would cause a substantive increased demand for domestic water supplies that cannot be responded to by existing plans or General Plan policies.
- The General Plan was determined to have a significant impact if development would require substantial expansion of domestic water distribution and storage facilities that cannot be responded to by existing plans or General Plan policies.
- The General Plan was determined to have a significant impact if development would require the substantive extension of sewer mains and capacity, and expansion of treatment facilities that cannot be responded to by existing plans or General Plan policies.

The General Plan was determined to have a significant impact if development would produce substantive solid waste increases in excess of landfill that cannot be responded to by existing plans or General Plan policies.

Responses a - c): The General Plan EIR considered whether development under the General Plan would cause an increase in demand for domestic water supplies that could not be met, or would require substantial expansion of domestic water distribution and storage facilities that could not be

addressed by existing facilities. General Plan policy WATER 1.3 requires adequate levels of water supply and distribution to be in place to accommodate new development. Based on this policy, and the City's water conservation efforts, the General Plan concludes the impact is less than significant. The proposed project would result in development of the project site with a greater intensity than currently exists on the subject site, but not outside that anticipated in the General Plan.

The proposed project, being a redevelopment of an improved site, will not require or result in the relocation or construction of new or expanded water, wastewater or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects. The City has sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. The project will not result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the projects projected demand in addition to the providers existing commitments. The proposal will not 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. The proposal will comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Water. The City currently provides water service to the project site. The proposed project, if approved by the City, will be served by the City from the City's existing and future portfolio of water supplies. The proposed project would connect to the City's existing water distribution infrastructure. The water supply for the proposed project would have the same water supply reliability and water quality as the water supply available to each of the City's other existing and future water customers. There are three primary water rights and contracts (collectively, "water supplies") that are used within the City's existing service area and SOI. All three of these water supplies are used to meet the water demands for the City's residents. In several areas within the City, the water supplies can be interchanged and commingled for delivery to end users. The water supplies are:

- WDCWA SWRCB Appropriative Water Right Permit 20281;
- WDCWA's CVP Contract No. 14-06-200-7422X-R-1; and
- City of Davis' groundwater rights.

The proposed project will be served from the existing water connections.
Limited amounts of water would be necessary during the construction phase of the project, but this would be a temporary use of water for construction related activities, and would not be in substantial amounts. Although the project would increase the amount of water used due to the car wash, the car wash will be equipped with a recirculating water system, to help reduce water waste. Additionally, it will have an interceptor installed prior to discharge of the waste water pursuant to 2019 California Plumbing Code. Therefore, a ***less than significant*** impact would occur related to water supply and water infrastructure.

Wastewater. The City currently provides wastewater service to the project site. Wastewater generated at the project site would be conveyed to the City's Wastewater Treatment Plant (WWTP) for treatment and disposal. The WWTP would be sized to accommodate 6.0 million gallons per day (MGD) of average dry weather flow (ADWF). ADWF is defined as the average of the three consecutive lowest-flow calendar months, which for the City usually coincides with the period of July through September. Now that the Secondary and Tertiary Improvements (STI) Phase of the WWTP

upgrade project has been completed, West Yost has estimated that the available ADWF capacity of the WWTP is 1.66 MGD, or 28 percent of design capacity[12].

The increase in wastewater generated by the proposed project due to increased employees on the site would be within the City's wastewater capacity, and would not result in exceedance of the design capacity of the WWTP. The current capacity of the WWTP would be sufficient to handle the wastewater flow from the proposed project. In addition, the proposed project is required to pay sewer impact fees, which would contribute towards the cost of future upgrades, when needed. As a result, the proposed project would not have adverse impacts to wastewater treatment capacity. Because the project applicant would pay City sewer impact fees to redevelop the site, and adequate long-term wastewater treatment capacity is available to serve full build-out of the project, a ***less than significant*** impact would occur related to requiring or resulting in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Responses d), e): Solid waste collection and disposal in the City of Davis (including the project site) is provided by Recology, Inc. Non-recyclable waste generated by the City of Davis is disposed of at the 722-acre Yolo County Central Landfill. This landfill has a permitted maximum disposal of 1,800 tons per day. The total permitted capacity of the landfill is 49,035,200 cubic yards, which is expected to accommodate an operational life of about 68 years (January 1, 2081).

As previously stated, the proposed project will result in significant intensification of land uses. However, no significant additional demand for landfill, or other waste facilities will be created by the project operation. However, limited amounts of solid waste could be generated during the construction phase of the project, but this would be temporary, and would not be in substantial amounts, and would not interfere with a waste facility's permitted capacity.

The proposed project would be required to comply with applicable state and local requirements, including those pertaining to solid waste, construction waste diversion, and recycling. Specifically, Chapter 32 of the City's Municipal Code regulates the management of garbage, recyclables, and other wastes. Chapter 32 sets forth solid waste collection and disposal requirements for residential and commercial customers, and addresses yard waste, hazardous materials, recyclables, and other forms of solid waste.

The project would not interfere with regulations related to solid waste. Implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

[12] West Yost Associates. Impacts of Innovation Center/Nishi Property Development on Wastewater Collection System Capacity. Technical Memorandum. March 25, 2015.

XX. WILDFIRE

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?			X	
d) 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	

Responses to Checklist Questions

General Plan EIR Significance Criteria

The General Plan EIR does not include an analysis of potential impacts related to wildfire.

Response a): The City's Planning Area is not located within or near a Very High Fire Hazard Severity Zone or State Responsibility Area. Implementation of the proposed project would not result in any substantial modifications to the existing roadway system and would not interfere with potential evacuation or response routes used by emergency response teams. The proposed project would also not interfere with any emergency response plan or emergency evaluation plan. Therefore, impacts from project implementation would be considered ***less than significant*** relative to this topic.

Responses b), c): The project site is surrounded by existing urban uses, and is a redevelopment of an underutilized property. The proposed project buildings would be constructed in accordance with the most recent California Building Standards Code.

No additional demand for fire protection will be created by the project. Implementation of the proposed project would not require additional demands for fire protection services from the City of Davis Fire Department beyond the existing condition. The project would not exacerbate fire risk, or require the installation or maintenance of infrastructure that may exacerbate fire risk. Therefore, impacts from project implementation would be considered ***less than significant*** relative to this topic.

Response d): Runoff from the project site currently flows to the existing City storm drains located on Russell Boulevard. Upon development of the site, stormwater would continue to flow to the storm drains in the adjacent roadway. As such, the proposed drainage would be nearly identical to the existing condition. Additionally, the project site is located within FEMA Zone X, indicating that the

site is located outside of the 100-year flood hazard zone. Further, because the site is essentially flat and located in an existing urbanized area of the City, downstream landslides would not occur. Therefore, impacts from project implementation would be considered ***less than significant*** relative to this topic.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

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

Responses to Checklist Questions

Responses: a -c): As discussed in Section IV, Biological Resources, the proposed project would not: 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; or substantially reduce the number or restrict the range of a rare or endangered plant or animal. The project site is currently developed and disturbed. However, there are identified riparian or other sensitive habitat types located in and out of the area of the project site.

There are variety of raptors and/or birds protected by the Migratory Bird Treaty Act (MBTA) that could utilize the trees on the subject site as habitat for nesting. A search on July 27, 2021, of the U. S. Fish & Wildlife Service IPaC revealed that there are 9 Endangered Species and 18 Migratory Birds that occur within and outside of the project area.

The City standard condition of approval includes preconstruction surveys for protected birds if construction would occur during the nesting season for birds protected under the MBTA and/or California Fish and Game Code.

As such, the proposed project would not substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of a rare or endangered plant or animal.

However, it has been determined that there is no potential for the proposed project to: eliminate important examples of the major periods of California history or prehistory; create cumulatively considerable impacts; or adversely affect human beings. As such, the City of Davis standard

mitigation as modified will apply. With imposition of the City's standard conditions/mitigation measures, any impacts are considered ***less than significant.***

The construction phase could affect surrounding neighbors through increased air emissions and noise. However, with the implementation of the City's standard mitigation measures, mitigation measures identified and imposed herein, regulatory standards, and best management practices, the project impacts would be less than significant related to these topics. The operational phase of the project, which is a residential use of the subject site, would be comparable in nature to the existing baseline condition. As discussed throughout this Initial Study, the proposed project would not cause substantial adverse effects on human beings. The proposed project would not have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly. As such, a ***less than significant*** impact would result.

REFERENCES

Brown and Caldwell. 2015 (January 27). Water Supply Assessment for the Nishi Gateway Project. Prepared for City of Davis.

Envirostar database search (DTSC, 2015). Available online at: https://www.envirostor.dtsc.ca.gov/public/.

CALEEMOD. v2016.3.2. California Air Pollution Control Officers Association (CAPCOA). Accessed February 2019. Available at: http://www.caleemod.com/

California Air Pollution Control Officers Association. Quantifying Greenhouse Gas Mitigation Measures. August 2010.

California Department of Conservation. 2016. California Important Farmland Finder. Available at: <http://maps.conservation.ca.gov/ciff/ciff.html>.

California Department of Conservation. California Land Conservation Act 2016 Status Report, The Williamson Act. December 2016.

California Department of Resources Recycling and Recovery (CalRecycle). SWIS Facility Detail – Yolo County Central Landfill (57-AA-0001). Accessed January 2019. Available at: <https://www2.calrecycle.ca.gov/SWFacilities/Directory/57-AA-0001/Detail/>.

California Energy Commission. 2005. Global Climate Change: In Support of the 2005 Integrated Energy Policy Report. (CEC-600-2005-007.) Available at: <http://www.energy.ca.gov/2005publications/CEC-100-2005-007/CEC-100-2005-007-CMF.PDF>.

California Energy Commission. 2006. Inventory of California Greenhouse Gas Emissions and Sinks 1990 to 2004. (CEC-600-2006-013-SF.) Available at: <http://www.energy.ca.gov/2006publications/CEC-600-2006-013/CEC-600-2006-013-SF.PDF>.

California Herps. A Guide to Amphibians and Reptiles of California. Available at: <http://www.californiaherps.com/>.

California Department of Forestry and Fire Protection. Yolo County, Very High Fire Hazard Severity Zones in LRA. June, 2008.

City of Davis 2010 Urban Water Management Plan (City of Davis 2010 UWMP, 2011). July 2011.

City of Davis Climate Action and Adaptation Plan. Adopted June 2010.

City of Davis General Plan (City of Davis General Plan Update, 2007). Adopted May 2001. Amended Through January 2007.

City of Davis General Plan EIR (Davis General Plan EIR, 2000). January 2000.

City of Davis Staff Report. April 21, 2009. Subject: Greenhouse Gas Reduction Thresholds and Standards for New Residential Development.

City of Davis Traffic Data Map. Available at: <https://cityofdavis.org/city-hall/public-works/transportation/traffic-division-home/traffic-data-map>.

Davis Fire Department Information: "About DFD" (City of Davis, 2015). September 2015. Available at: http://cityofdavis.org/city-hall/fire-department/about-dfd.

Intergovernmental Panel on Climate Change. 2007. Climate Change 2007: The Physical Science Basis, Summary for Policy Makers. Available at: <http://fire.pppl.gov/ipcc_summary_020207.pdf>.

State Water Resources Control Board 2010 Integrated Report Clean Water Act Sections 303(d) and 305(b) (SWRCB, 2010). April 19, 2010. Available online at: <http://www.waterboards.ca.gov/water_issues/programs/tmdl/2010state_ir_reports/docs/2010ir0419.pdf>.

West Yost Associates. Impacts of Innovation Center/Nishi Property Development on Wastewater Collection System Capacity. Technical Memorandum. March 25, 2015.

Yolo-Solano Air Quality Management District. Handbook for Assessing and Mitigating Air Quality Impacts. Adopted July 11, 2007.

Woodland – Davis Clean Water Agency. The Project. Available at: https://www.wdcwa.com/project-overview/ Accessed June 2021.

APPENDICES

1. Arborist Report
2. CalEEMOD Results
3. IPaC Explore Location Resources
4. Noise Study Report
5. Traffic Study Report
6. Yocha Dehe Wintun Nation Letter

TREE
ASSOCIATES

October 24, 2021

Darshan Mundy
4810 Chiles Blvd.
Davis, CA 95618

Kurt Wagenknecht, Architect
K12 Architects, Inc.
3090 Fite Circle, Suite 104
Sacramento, CA 95827

RE: Arborist Report, 4810 Chiles Road, Davis

Darshan and Kurt,

Attached is an Arborist Report for the Chiles Plaza which 1) includes palm trees (in map, evaluation, impact assessment and appraisal), 2) clarifies which trees are off site, and, 3) indicates that there is a possibility that the palms may be transplanted. This satisfies Davis city planner Ike's requests. Please do not hesitate to contact me should you have questions regarding this report.

Sincerely,

John M. Lichter, M.S.
ASCA Registered Consulting Arborist #375
ISA Certified Arborist #863
ISA Qualified Tree Risk Assessor
ASCA Qualified Tree and Plant Appraiser

TREE
ASSOCIATES

ARBORIST REPORT
4810 CHILES ROAD
DAVIS, CALIFORNIA

Prepared for
DARSHAN MUNDY
Davis, California

Prepared by
TREE ASSOCIATES
John M. Lichter, M.S.
ASCA Registered Consulting Arborist #375
ISA Certified Arborist #863
ISA Qualified Tree Risk Assessor
ASCA Qualified Tree and Plant Appraiser

October 24, 2021

Assignment

Kurt Wagenknecht, Architect with K12 Architects, Inc. requested, on behalf of property owner Darshan Mundy, an Arborist Report concerning trees on the Chiles Plaza project site at 4810 Chiles Road. This Arborist Report includes a tree evaluation, a development impact assessment, an appraisal of tree values, and preservation guidelines for 1) all City of Davis protected trees on on site; 2) all palms on site; and 3) off site trees with trunks located within 15 feet of the subject property (no appraisal was given for the off-site trees).

Limits of the Assignment

- This evaluation reports on the condition of the subject trees at the time of my site visit. Tree conditions change over time and, as they change, this report may need to be revised.
- The result of the evaluations for trees for which more detailed examination and/or testing and risk assessment is recommended (including aerial inspection, decay mapping and/or root examination) is provisional, pending the outcome of these studies.
- This evaluation was based on a visual inspection from the ground. In some cases, my access and vantage point to examine the trees was limited due to the location of the trees.

Tree Evaluation

I identified, tagged in the field, measured and evaluated the ordinance-protected trees on October 1, 2021.[1] For each of these trees, the following data were collected.

- Tree Number – corresponds to a round aluminum tag affixed to each protected tree (I used tags 969-985). Lettered trees A-F were located within 15 feet from the property boundaries, off site.
- Species – common and scientific name of the tree.
- Dia./Ht. – the diameter of the tree (in inches) at 4.5' above grade, unless measurement at another location between 1 and 5 feet above grade provided a more accurate reflection of the size of the tree. For palms, the height in feet is provided.
- Drip. – the approximate maximum distance from the trunk to the edge of the branches, in feet. In the case of off-site trees, the distance is the extent of the canopy onto the subject property.
- Tree Protection Zone (TPZ) – the radius in feet of a circular tree protection zone (centered at the trunk) recommended by the author; typically one foot per inch trunk diameter.
- Comments – comments regarding tree and landscape features that influenced health, structure and condition ratings.
- Overall Condition Rating – a rating of poor through excellent indicating the overall condition of the tree considering tree health, structure and form.
- Recommendations – recommendations for tree work or treatments to improve tree structure or health or for further evaluation, where necessary. Note: recommendations are indicated in red where removal was recommended.

Exhibit 1, entitled "Tree Evaluation" summarizes the results of the tree evaluation. The locations of the trees can be found on the attached copy of the preliminary grading, drainage and utility plan.

[1] Protected trees are those with trunk diameters of five inches or greater (defined as trees of significance in the City of Davis Code). I included multiple trunked trees if the sum of their largest diameter stem plus half the diameter of the remaining stems was equal to five inches or greater.

Summary of Tree Evaluation

Number of Trees, Species Makeup, Size, Age, Location:
The project site included a convenience store and gas station, a subway restaurant and parking. There were 7 protected trees on site: three Chinese pistache, three aleppo pine, and one red box tree.

The trees' varied in size and age. The largest trees were the Aleppo pines (18-28 inch trunk diameter) and the red box (multiple trunks of 21, 22 and 23 inch diameter). I estimated that none of the trees was older than 35 years.

There were also nine windmill palm and one Canary Island date palm on site. The windmill palms were 15 to 24 feet tall and located in a continuous strip planter. The Canary Island date palm was 3 feet tall and located in a circular bench/planter.

There were 6 off-site trees: three Chinese tallow, two Canary Island pines and one Chinese pistache. Their trunks ranged in size from 10 to 26 inches diameter.

Tree Condition, Removal Recommendations, Recommendations to Improve Tree Condition:
I rated the overall health of the trees between 20 and 85%. Two Aleppo pines (#972 and 974) were rated 20 and 25% due to their poor structure and form. I recommended that these two trees be removed for these reasons.

While they are drought tolerant, the other trees could benefit from regular irrigation. Many of the trees' structure can be improved with pruning (see exhibit 1 for specific recommendations).

Preliminary Development Impact Assessment

I reviewed the project's preliminary grading, drainage and utility plan dated January 13, 2021 by Stukam Consulting Engineers in order to determine the potential impact of development on the trees and provide possible design modifications and/or construction techniques to lessen development impacts to the trees. The following data was provided for the subject trees and palms. The results may be found in Exhibit 2, attached.

- Tree Number, Species, Diameter, TPZ – see description above.
- Proposed Construction Within TPZ – a description of infrastructure proposed within the TPZ.
- Impact Rating – a rating low, moderate, high or severe considering the possible impact to tree condition from construction of the proposed plan.[2] Impact ratings assumed that 1) my description of construction was accurate; 2) the extent of excavation was limited to 5' off buildings and 1' off drives, parking and walkways (except where noted in the table); utility trenches were not laid back; and there was no grading within protection zones outside of these areas. The actual impact of construction will be dictated by the amount of injury and environmental changes which occur in the field.
- Possible Design Modifications/Construction Methods - possible adjustments to the design and/or construction methods that could decrease the impact of the development on the trees. I did not indicate all possible design modifications (such as moving buildings). Changes to the site plan other than those I mention in this table could result in preserving additional trees and/or modifying potential impacts.
- Impact Rating if Design Modified as Indicated – a rating of low, moderate, high or severe considering the design is modified as indicated in the previous column and assuming the assumptions described under impact rating, above.

[2] Note: Impact ratings were preliminary and assumed typical root locations. Once construction plans are prepared and/or updated, the impact ratings will need to be updated. The actual impact is dependent upon the amount of injury to the tree, changes in the root environment and other factors. Root locations studies following pneumatic or hydraulic excavation can provide this information and enable a more accurate assessment of the impacts of construction.

Trees of Significance on Site:

The following is a summary of the development impacts to the 7 ordinance-protected trees of significance on site, assuming the reviewed plans are carried out as well as if the design modification recommendations provided in exhibit 2 are followed. If the design modifications are followed, the impact of the trees to be preserved would be low.

	Impact with Current Plan	Impact with Design Modifications
Total number of ordinance protected on-site trees	7	7
Recommended for removal by consulting arborist due to poor condition	2	2
Trees to be removed due to site layout conflicts	2	2
Low Impact	0	3
Moderate Impact	0	0
High Impact	3	0
Severe Impact	0	0

On Site Palms:

Of the 10 palms on site, four are slated to be removed due to site layout conflicts; four were given a moderate impact rating and two were given a severe impact rating. If the design modification recommendations are followed, the impact ratings of six of the palms would be low/moderate.

Off Site Trees:

The six off-site trees were given moderate/high or severe impact ratings. If the recommendations concerning design modification are followed, the impact ratings for off-site trees would be low.

Once construction plans are prepared, the impact assessment should be updated. If there are changes to the location of infrastructure or there is additional disturbance and/or construction within the Tree Protection Zone (TPZ) or MTPZ (Modified TPZ – portion of TPZ without infrastructure), the prognoses for retained trees may need to be adjusted.

Appraisal

I appraised the monetary value of all protected, on site trees as well as the palms. The appraisal used Arborist-standard methods found in the Guide for Plant Appraisal, 10th Edition, authored by the Council of Tree and Landscape Appraisers. The results of the appraisal can be found in Exhibit 3, attached.

Tree Preservation Guidelines

The guidelines presented below should be followed for all trees to be preserved to ensure the least impact to the trees considering the existing plans.

- Tree preservation measures should be indicated on construction plans.
- Indicate surveyed trunk locations and tree protection zones (TPZ's) as described in attached table on all construction plans for trees to be preserved. Note, where infrastructure is located within protection zones, indicate modified tree protection zones (MTPZ's) and fencing as close to infrastructure as possible (minimize overbuild).
- Engage the Consulting Arborist to revise the development impact assessment as construction plans are prepared/revised.
- Conduct a meeting to discuss tree preservation guidelines with the Consulting Arborist and all contractors, subcontractors and project managers prior to the initiation of demolition and construction.
- Any pruning required for construction or recommended in this report should be performed by an ISA Certified Arborist or Tree Worker. Pruning for necessary clearance should be the minimum required for the project performed prior to demolition by an ISA Certified Arborist.
- Prior to any demolition activity, identify (tagged) trees to be preserved and install tree protection fencing as indicated on construction plans.
- Tree protection fences should be made of chain link. These fences are not to be removed or moved until construction is complete except under Arborist supervision. Avoid soil or above ground disturbances within the fenced area.
- Avoid grading, compaction, trenching, rototilling, vehicle traffic, material storage, spoil, waste or washout or any other disturbance within TPZ's/MTPZ's.
- Any work that is to occur within the protection zones of the trees should be monitored by the Consulting Arborist.
- Prior to trenching or grading within the protection zone of trees, carefully excavate, expose and mark roots >/= 2" diameter and preserve if possible or cut cleanly with a sharp saw under Arborist supervision.
- If roots >/= 2 inches or limbs larger than 3 inches in diameter are cut or damaged during construction, contact Consulting Arborist as soon as possible to inspect and recommend appropriate remedial treatments.
- All trees to be preserved should be irrigated once every week during non-Winter months to uniformly wet the soil to a depth of at least 18 inches under and beyond their canopies.

Arborist Disclosure Statement

The following statement pertains to my work and this report.

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 risk associated with trees is to eliminate all trees.

Glossary[3]

Bow – the gradual curve of a branch or stem.

Callus – growth resulting from and found at the margin of wounds.

Canker – a localized area of dead tissue on a stem or branch, caused by fungal or bacterial organisms.

Central Leader – the main stem of the tree.

Chlorotic – yellow.

Codominant – equal in size and relative importance.

Crown – parts of the tree above the trunk.

Crown Clean – the removal of dead, dying, diseased, broken, and weakly attached branches and watersprouts from a tree's crown.

Decay – process of degradation of woody tissues by fungi and bacteria.

Dieback – death of shoots and branches, generally from tip to base.

Dropcrotch – the process of shortening trunks or limbs by pruning back to dominant lateral limbs.

End Weight – the concentration of foliage at the distal ends of branches.

Epicormic – shoots which result from adventitious or latent buds; often indicates poor vigor.

Included bark – pattern of development at branch junctions where bark is turned inward rather than pushed out.

Primary limb – limb attached directly to the trunk.

Reduction cut – shortening the length of a branch or stem by cutting it back to a lateral branch of at least one-third the diameter of the cut stem.

Root crown – area at the base of a tree where the roots and stem merge.

Secondary limb – limb attached directly to a primary limb.

Sound wood – undecayed wood.

Suppressed – trees which have been overtopped and whose crown development is restricted from above.

Target – people or property potentially affected by tree failure.

Topped – Pruned to reduce height by cutting large branches back to stubs.

Train – to prune a young tree to establish a strong structure.

Vigor – overall health.

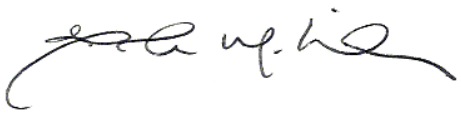
Watersprouts – vigorous, upright, epicormic shoots that grow from latent buds in older wood.

3 Definitions from author or Matheny and Clark, Evaluation of Hazard Trees in Urban Areas, 2nd Edition c 1994, ISA.

Certification of Performance

I, John M. Lichter, certify:

- That I have personally inspected the tree(s) and/or the property referred to in this report, and have stated my findings accurately. The extent of the evaluation and/or appraisal is stated in the attached report and the Terms and Conditions;
- That I have no current or prospective interest in the vegetation or the property that is the subject of this report, and I have no personal interest or bias with respect to the parties involved;
- That the analysis, opinions and conclusions stated herein are my own, and are based on current scientific procedures and facts;
- That 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 assessment, the attainment of stipulated results, or the occurrence of any subsequent events;
- That my analysis, opinions, and conclusions were developed and this report has been prepared according to commonly accepted Arboricultural practices;
- That no one provided significant professional assistance to the consultant, except as indicated within the report.



John M. Lichter, M.S.
ASCA Registered Consulting Arborist #375
ISA Certified Arborist #863
ISA Qualified Tree Risk Assessor
ASCA Qualified Tree and Plant Appraiser

ASSUMPTIONS AND LIMITING CONDITIONS: TREE ASSOCIATES, INC.

1. Any legal description provided to the consultant/appraiser is assumed to be correct. Any titles and ownerships to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised or evaluated as though free and clear, under responsible ownership and competent management.

2. It is assumed that any property is not in violation of any applicable codes, ordinances, statutes or other governmental regulations.

3. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant/appraiser can neither guarantee nor be responsible for the accuracy of information provided by others.

4. The consultant/appraiser shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the fee schedule and contract of engagement.

5. Unless required by law otherwise, possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person to whom it is addressed, without the prior expressed written or verbal consent of the consultant/appraiser.

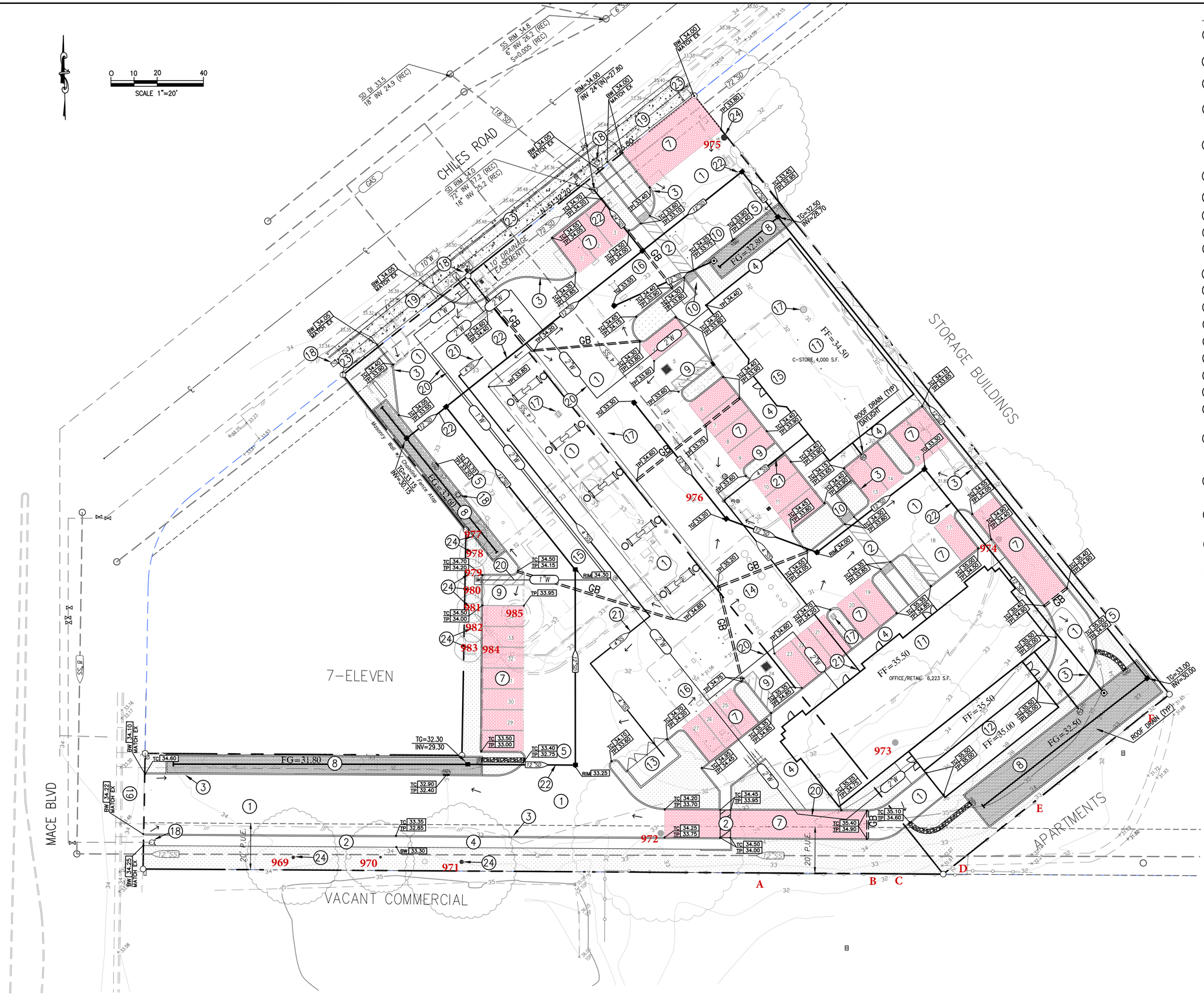
6. Unless required by law otherwise, neither all nor any part of the contents of this report, nor copy thereof, shall be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales or other media, without the prior expressed written or verbal consent of the consultant/appraiser -- particularly as to value conclusions, identity of the consultant/appraiser, or any reference to any professional society or institute or to any initialed designation conferred upon the consultant/appraiser as stated in his qualifications.

7. This report and any values expressed herein represent the opinion of the consultant/appraiser, and the consultant's/appraiser's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor 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 unless expressed otherwise. The reproduction of any information generated by architects, engineers, or other consultants on any sketches, drawings, or photographs is for the express purpose or coordination and ease of reference only. Inclusion of said information on any drawings or other documents does not constitute a representation by John M. Lichter or TREE ASSOCIATES as to the sufficiency or accuracy of said information.

9. Unless expressed otherwise: 1) information contained in this report covers only those items that were 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. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.

10. Loss or alteration of any part of this report invalidates the entire report.



PROPOSED IMPROVEMENT NOTES:

1. PLACE 6" PCC OVER 6" AB COMPACTED TO A MINIMUM 95% COMPACTION.
2. ADA PATH OF TRAVEL. MAXIMUM SLOPE IN DIRECTION OF TRAVEL IS 4.8% WITH 1.8% MAXIMUM CROSS SLOPE.
3. CONSTRUCT 6" VERTICAL CURB.
4. CONSTRUCT SIDEWALK, PLACE 4"(MIN) PCC OVER 4"(MIN) AB COMPACTED TO A MINIMUM 95% COMPACTION. MAXIMUM SLOPE IN DIRECTION OF TRAVEL IS 4.8% WITH MAXIMUM 1.8% CROSS-SLOPE.
5. CONSTRUCT 18" CURB OPENING. PLACE 4"(MIN) DIA. COBBLES 0.2' BELOW CURB OPENING AND 2' ON EITHER SIDE, SEE DETAIL H ON SHEET C11.
6. PLACE 8" PCC OVER 9" PEA GRAVEL WHERE FUEL LINES ARE LOCATED
7. CONSTRUCT PERVIOUS PAVERS.
8. CONSTRUCT BIO-PLANTER.
9. ADA PARKING. MAXIMUM SLOPE IN ALL DIRECTIONS IS 1.8%.
10. PLACE CURB RAMP, MAXIMUM SLOPE IN DIRECTION OF TRAVEL IS 8.33% WITH 1.8% MAXIMUM CROSS SLOPE.
11. PROPOSED BUILDING
12. PROPOSED CARWASH
13. PROPOSED TRASH ENCLOSURE. SEE ARCHITECTURAL PLANS.
14. PROTECT EXISTING UNDERGROUND FUEL TANKS.
15. REMOVE EXISTING BUILDING
16. REMOVE EXISTING FUELING CANOPY
17. REMOVE EXISTING STORM DRAIN INLET
18. RELOCATE EXISTING UTILITIES
19. REPLACE EXISTING DRIVEWAY PER CITY STD DETAIL
20. PROPOSED WATER LINE TO BUILDINGS, CARWASH, AIR & WATER, AND STUB FOR IRRIGATION. CONNECT TO EXISTING WATER METER. REMOVE ANY EXISTING WATER LINES NOT BEING USED. WATER LINES ONSITE AND OFFSITE CONNECTIONS TO BE VERIFIED.
21. PROPOSED SEWER LINE TO BUILDINGS AND TRASH ENCLOSURE. PROPOSED SEWER TO CONNECT TO EXISTING SEWER LINES ONSITE. REMOVE ANY EXISTING SEWER LINES NOT BEING USED. SEWER LINES ONSITE AND OFFSITE CONNECTIONS TO BE VERIFIED.
22. PROPOSED STORM DRAIN LINE. CONNECT TO EXISTING SD MANHOLE ONSITE. REMOVE ANY EXISTING STORM DRAIN LINES NOT BEING USED.
23. REPLACE EXISTING SIDEWALK, CURB, AND GUTTER ALONG PROPERTY FRONTAGE PER CITY STD DETAIL. MATCH EXISTING SIDEWALK CURB AND GUTTER OF ADJACENT PROPERTIES.
24. PROTECT EXISTING TREE IF POSSIBLE.

BY	COD	DATE	REVISIONS

REGISTERED PROFESSIONAL ENGINEER (TYLER F. SUBIDO) No. 58122 CIVIL STATE OF CALIFORNIA

Preliminary Not for Construction

TERA PROPERTIES, LLC
4810 CHILES RD
DAVIS, CA 95618

STUKAM CONSULTING ENGINEERS, INC.
11344 COLOMA ROAD, SUITE 235C
GOLD RIVER CA 95670
(916) 835 5791
(916) 858-8241(FAX)

GRADING, DRAINAGE & UTILITY PLAN
4810 CHILES ROAD
CONVENIENCE STORE, GAS STATION
CAR WASH, & RETAIL BUILDINGS
APN: 068-010-011/013/014
CITY OF DAVIS YOLO COUNTY CALIFORNIA

JOB NO: 2020-019 | Designed: FTS | Checked: FTS | Date: 01-13-2021

SHEET
C1
Of C3 SHEETS

JOB NUMBER:
2020-019

PLOTTED DATE: T:\2020\2020-019 4810 Chiles Road\Dwg\Preliminary\2020-019 Preliminary Grading Plan.dwg, 1/29/2021 4:10:27 PM

PRELIMINARY NOT FOR CONSTRUCTION

Exhibit 3.

Appraisal Calculations
4810 Chiles Road

To Accompany
Tree Associates Report 10/4/21

Tree #	Species	Dia./Ht. (palms)	Area of Trunk (sq. in.)	Unit Cost of Nursery Tree ($83/sq. in. or $/trunk ft. palms)	Basic Cost (area X unit cost)	Overall Condition Rating	Functional Limitation Rating	External Limitation Rating	Depreciated Cost	Appraised Value (rounded)
969	Chinese pistache (*Pistacia chinensis*)	18@2' adj 16	201	$ 83.00	$ 16,683.00	60%	65%	100%	$ 6,506.37	$ 6,500.00
970	Chinese pistache (*Pistacia chinensis*)	15	177	$ 83.00	$ 14,691.00	65%	65%	100%	$ 6,206.95	$ 6,200.00
971	Chinese pistache (*Pistacia chinensis*)	21@1' adj 18	254	$ 83.00	$ 21,082.00	75%	65%	100%	$ 10,277.48	$ 10,300.00
972	aleppo pine (*Pinus halepensis*)	29@2.5' adj. 27	572	$ 83.00	$ 47,476.00	25%	70%	100%	$ 8,308.30	$ 8,300.00
973	aleppo pine (*Pinus halepensis*)	28	615	$ 83.00	$ 51,045.00	65%	70%	100%	$ 23,225.48	$ 23,200.00
974	aleppo pine (*Pinus halepensis*)	28	615	$ 83.00	$ 51,045.00	20%	70%	100%	$ 7,146.30	$ 7,100.00
975	red box (*Eucalyptus polyanthemos*)	22,23, 21; adj. 30	707	$ 83.00	$ 58,681.00	50%	50%	100%	$ 14,670.25	$ 14,700.00

Exhibit 3.

Appraisal Calculations
4810 Chiles Road

To Accompany
Tree Associates Report 10/4/21

Tree #	Species	Dia./Ht. (palms)	Area of Trunk (sq. in.)	Unit Cost of Nursery Tree ($83/sq. in. or $/trunk ft. palms)	Basic Cost (area X unit cost)	Overall Condition Rating	Functional Limitation Rating	External Limitation Rating	Depreciated Cost	Appraised Value (rounded)
976	windmill palm (*Trachycarpus fortunei*)	15	n/a	$ 30.00	450	65%	75%	100%	$ 219.38	$ 220.00
977	windmill palm (*Trachycarpus fortunei*)	16	n/a	$ 30.00	480	85%	75%	100%	$ 306.00	$ 310.00
978	windmill palm (*Trachycarpus fortunei*)	22	n/a	$ 30.00	660	85%	75%	100%	$ 420.75	$ 420.00
979	windmill palm (*Trachycarpus fortunei*)	20	n/a	$ 30.00	600	85%	75%	100%	$ 382.50	$ 380.00
980	windmill palm (*Trachycarpus fortunei*)	24	n/a	$ 30.00	720	85%	75%	100%	$ 459.00	$ 460.00
981	windmill palm (*Trachycarpus fortunei*)	20	n/a	$ 30.00	600	85%	75%	100%	$ 382.50	$ 380.00
982	windmill palm (*Trachycarpus fortunei*)	14	n/a	$ 30.00	420	85%	75%	100%	$ 267.75	$ 270.00
983	windmill palm (*Trachycarpus fortunei*)	12	n/a	$ 30.00	360	50%	75%	100%	$ 135.00	$ 140.00

Exhibit 3.

Appraisal Calculations
4810 Chiles Road

To Accompany
Tree Associates Report 10/4/21

Tree #	Species	Dia./Ht. (palms)	Area of Trunk (sq. in.)	Unit Cost of Nursery Tree ($83/sq. in. or $/trunk ft. palms)	Basic Cost (area X unit cost)	Overall Condition Rating	Functional Limitation Rating	External Limitation Rating	Depreciated Cost	Appraised Value (rounded)
984	windmill palm (*Trachycarpus fortunei*)	22	n/a	$ 30.00	660	85%	75%	100%	$ 420.75	$ 420.00
985	Canary Island date palm (*Phoenix canariensis*)	30	n/a	$ 375.00	11250	80%	75%	100%	$ 6,750.00	$ 6,800.00

Chiles Plaza - Yolo/Solano AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Chiles Plaza

Yolo/Solano AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1.00	1000sqft	0.02	1,000.00	0
Convenience Market with Gas Pumps	5.00	Pump	0.02	705.87	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2024
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - This is a gas station with convenience store, restuarant, and office spaces. There is no residential units.

Construction Phase -

Demolition -

Land Use Change -

Sequestration -

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	9/12/2022	10/27/2023
tblConstructionPhase	PhaseEndDate	8/29/2022	7/14/2023

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstructionPhase	PhaseEndDate	4/6/2022	2/17/2023
tblConstructionPhase	PhaseEndDate	4/11/2022	2/23/2023
tblConstructionPhase	PhaseEndDate	9/5/2022	10/20/2023
tblConstructionPhase	PhaseEndDate	4/7/2022	2/20/2023
tblConstructionPhase	PhaseStartDate	9/6/2022	10/21/2023
tblConstructionPhase	PhaseStartDate	4/12/2022	2/27/2023
tblConstructionPhase	PhaseStartDate	3/24/2022	2/6/2023
tblConstructionPhase	PhaseStartDate	4/8/2022	2/22/2023
tblConstructionPhase	PhaseStartDate	8/30/2022	10/16/2023
tblConstructionPhase	PhaseStartDate	4/7/2022	2/20/2023

2.0 Emissions Summary

Chiles Plaza - Yolo/Solano AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	2.1685	10.1943	7.6099	0.0146	5.3728	0.4204	5.7932	2.5847	0.3868	2.9715	0.0000	1,416.3075	1,416.3075	0.4432	3.5800e-003	1,427.8600
Maximum	**2.1685**	**10.1943**	**7.6099**	**0.0146**	**5.3728**	**0.4204**	**5.7932**	**2.5847**	**0.3868**	**2.9715**	**0.0000**	**1,416.3075**	**1,416.3075**	**0.4432**	**3.5800e-003**	**1,427.8600**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	2.1685	10.1943	7.6099	0.0146	5.3728	0.4204	5.7932	2.5847	0.3868	2.9715	0.0000	1,416.3075	1,416.3075	0.4432	3.5800e-003	1,427.8600
Maximum	**2.1685**	**10.1943**	**7.6099**	**0.0146**	**5.3728**	**0.4204**	**5.7932**	**2.5847**	**0.3868**	**2.9715**	**0.0000**	**1,416.3075**	**1,416.3075**	**0.4432**	**3.5800e-003**	**1,427.8600**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0393	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3100e-003	1.3100e-003	0.0000		1.4000e-003
Energy	5.3000e-004	4.7900e-003	4.0300e-003	3.0000e-005		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004		5.7540	5.7540	1.1000e-004	1.1000e-004	5.7882
Mobile	2.5573	2.5368	17.0678	0.0163	1.4190	0.0177	1.4367	0.3788	0.0165	0.3954		1,688.2384	1,688.2384	0.3158	0.1793	1,749.5627
Total	**2.5971**	**2.5416**	**17.0724**	**0.0163**	**1.4190**	**0.0181**	**1.4371**	**0.3788**	**0.0169**	**0.3957**		**1,693.9937**	**1,693.9937**	**0.3159**	**0.1794**	**1,755.3523**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0393	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3100e-003	1.3100e-003	0.0000		1.4000e-003
Energy	5.3000e-004	4.7900e-003	4.0300e-003	3.0000e-005		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004		5.7540	5.7540	1.1000e-004	1.1000e-004	5.7882
Mobile	2.5573	2.5368	17.0678	0.0163	1.4190	0.0177	1.4367	0.3788	0.0165	0.3954		1,688.2384	1,688.2384	0.3158	0.1793	1,749.5627
Total	**2.5971**	**2.5416**	**17.0724**	**0.0163**	**1.4190**	**0.0181**	**1.4371**	**0.3788**	**0.0169**	**0.3957**		**1,693.9937**	**1,693.9937**	**0.3159**	**0.1794**	**1,755.3523**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/6/2023	2/17/2023	5	10	
2	Site Preparation	Site Preparation	2/20/2023	2/20/2023	5	1	
3	Grading	Grading	2/22/2023	2/23/2023	5	2	
4	Building Construction	Building Construction	2/27/2023	7/14/2023	5	100	
5	Paving	Paving	10/16/2023	10/20/2023	5	5	
6	Architectural Coating	Architectural Coating	10/21/2023	10/27/2023	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,559; Non-Residential Outdoor: 853; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading	Graders	1	6.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	1.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.6463	5.7787	7.3926	0.0120		0.2821	0.2821		0.2698	0.2698		1,148.4055	1,148.4055	0.2089		1,153.6290
Total	**0.6463**	**5.7787**	**7.3926**	**0.0120**	**0.0000**	**0.2821**	**0.2821**	**0.0000**	**0.2698**	**0.2698**		**1,148.4055**	**1,148.4055**	**0.2089**		**1,153.6290**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0279	0.0193	0.2173	6.3000e-004	0.0761	3.9000e-004	0.0765	0.0202	3.6000e-004	0.0205		64.4203	64.4203	2.2000e-003	1.9900e-003	65.0673
Total	**0.0279**	**0.0193**	**0.2173**	**6.3000e-004**	**0.0761**	**3.9000e-004**	**0.0765**	**0.0202**	**3.6000e-004**	**0.0205**		**64.4203**	**64.4203**	**2.2000e-003**	**1.9900e-003**	**65.0673**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.6463	5.7787	7.3926	0.0120		0.2821	0.2821		0.2698	0.2698	0.0000	1,148.4055	1,148.4055	0.2089		1,153.6290
Total	**0.6463**	**5.7787**	**7.3926**	**0.0120**	**0.0000**	**0.2821**	**0.2821**	**0.0000**	**0.2698**	**0.2698**	**0.0000**	**1,148.4055**	**1,148.4055**	**0.2089**		**1,153.6290**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0279	0.0193	0.2173	6.3000e-004	0.0761	3.9000e-004	0.0765	0.0202	3.6000e-004	0.0205		64.4203	64.4203	2.2000e-003	1.9900e-003	65.0673
Total	**0.0279**	**0.0193**	**0.2173**	**6.3000e-004**	**0.0761**	**3.9000e-004**	**0.0765**	**0.0202**	**3.6000e-004**	**0.0205**		**64.4203**	**64.4203**	**2.2000e-003**	**1.9900e-003**	**65.0673**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5348	6.1887	3.9239	9.7300e-003		0.2266	0.2266		0.2084	0.2084		942.4317	942.4317	0.3048		950.0517
Total	**0.5348**	**6.1887**	**3.9239**	**9.7300e-003**	**0.5303**	**0.2266**	**0.7568**	**0.0573**	**0.2084**	**0.2657**		**942.4317**	**942.4317**	**0.3048**		**950.0517**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0139	9.6700e-003	0.1087	3.1000e-004	0.0380	1.9000e-004	0.0382	0.0101	1.8000e-004	0.0103		32.2101	32.2101	1.1000e-003	9.9000e-004	32.5336
Total	**0.0139**	**9.6700e-003**	**0.1087**	**3.1000e-004**	**0.0380**	**1.9000e-004**	**0.0382**	**0.0101**	**1.8000e-004**	**0.0103**		**32.2101**	**32.2101**	**1.1000e-003**	**9.9000e-004**	**32.5336**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5348	6.1887	3.9239	9.7300e-003		0.2266	0.2266		0.2084	0.2084	0.0000	942.4317	942.4317	0.3048		950.0517
Total	**0.5348**	**6.1887**	**3.9239**	**9.7300e-003**	**0.5303**	**0.2266**	**0.7568**	**0.0573**	**0.2084**	**0.2657**	**0.0000**	**942.4317**	**942.4317**	**0.3048**		**950.0517**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0139	9.6700e-003	0.1087	3.1000e-004	0.0380	1.9000e-004	0.0382	0.0101	1.8000e-004	0.0103		32.2101	32.2101	1.1000e-003	9.9000e-004	32.5336
Total	**0.0139**	**9.6700e-003**	**0.1087**	**3.1000e-004**	**0.0380**	**1.9000e-004**	**0.0382**	**0.0101**	**1.8000e-004**	**0.0103**		**32.2101**	**32.2101**	**1.1000e-003**	**9.9000e-004**	**32.5336**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.3119	0.0000	5.3119	2.5686	0.0000	2.5686			0.0000			0.0000
Off-Road	0.9335	10.1789	5.5516	0.0141		0.4201	0.4201		0.3865	0.3865		1,364.7713	1,364.7713	0.4414		1,375.8062
Total	**0.9335**	**10.1789**	**5.5516**	**0.0141**	**5.3119**	**0.4201**	**5.7320**	**2.5686**	**0.3865**	**2.9550**		**1,364.7713**	**1,364.7713**	**0.4414**		**1,375.8062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0223	0.0155	0.1739	5.0000e-004	0.0609	3.1000e-004	0.0612	0.0161	2.8000e-004	0.0164		51.5362	51.5362	1.7600e-003	1.5900e-003	52.0538
Total	**0.0223**	**0.0155**	**0.1739**	**5.0000e-004**	**0.0609**	**3.1000e-004**	**0.0612**	**0.0161**	**2.8000e-004**	**0.0164**		**51.5362**	**51.5362**	**1.7600e-003**	**1.5900e-003**	**52.0538**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.3119	0.0000	5.3119	2.5686	0.0000	2.5686			0.0000			0.0000
Off-Road	0.9335	10.1789	5.5516	0.0141		0.4201	0.4201		0.3865	0.3865	0.0000	1,364.7713	1,364.7713	0.4414		1,375.8062
Total	**0.9335**	**10.1789**	**5.5516**	**0.0141**	**5.3119**	**0.4201**	**5.7320**	**2.5686**	**0.3865**	**2.9550**	**0.0000**	**1,364.7713**	**1,364.7713**	**0.4414**		**1,375.8062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0223	0.0155	0.1739	5.0000e-004	0.0609	3.1000e-004	0.0612	0.0161	2.8000e-004	0.0164		51.5362	51.5362	1.7600e-003	1.5900e-003	52.0538
Total	**0.0223**	**0.0155**	**0.1739**	**5.0000e-004**	**0.0609**	**3.1000e-004**	**0.0612**	**0.0161**	**2.8000e-004**	**0.0164**		**51.5362**	**51.5362**	**1.7600e-003**	**1.5900e-003**	**52.0538**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946		1,104.6089	1,104.6089	0.3573		1,113.5402
Total	**0.6322**	**6.4186**	**7.0970**	**0.0114**		**0.3203**	**0.3203**		**0.2946**	**0.2946**		**1,104.6089**	**1,104.6089**	**0.3573**		**1,113.5402**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7900e-003	1.9300e-003	0.0217	6.0000e-005	7.6100e-003	4.0000e-005	7.6500e-003	2.0200e-003	4.0000e-005	2.0500e-003		6.4420	6.4420	2.2000e-004	2.0000e-004	6.5067
Total	**2.7900e-003**	**1.9300e-003**	**0.0217**	**6.0000e-005**	**7.6100e-003**	**4.0000e-005**	**7.6500e-003**	**2.0200e-003**	**4.0000e-005**	**2.0500e-003**		**6.4420**	**6.4420**	**2.2000e-004**	**2.0000e-004**	**6.5067**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946	0.0000	1,104.6089	1,104.6089	0.3573		1,113.5402
Total	**0.6322**	**6.4186**	**7.0970**	**0.0114**		**0.3203**	**0.3203**		**0.2946**	**0.2946**	**0.0000**	**1,104.6089**	**1,104.6089**	**0.3573**		**1,113.5402**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7900e-003	1.9300e-003	0.0217	6.0000e-005	7.6100e-003	4.0000e-005	7.6500e-003	2.0200e-003	4.0000e-005	2.0500e-003		6.4420	6.4420	2.2000e-004	2.0000e-004	6.5067
Total	**2.7900e-003**	**1.9300e-003**	**0.0217**	**6.0000e-005**	**7.6100e-003**	**4.0000e-005**	**7.6500e-003**	**2.0200e-003**	**4.0000e-005**	**2.0500e-003**		**6.4420**	**6.4420**	**2.2000e-004**	**2.0000e-004**	**6.5067**

Chiles Plaza - Yolo/Solano AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466		1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6112**	**5.5046**	**7.0209**	**0.0113**		**0.2643**	**0.2643**		**0.2466**	**0.2466**		**1,036.0878**	**1,036.0878**	**0.3018**		**1,043.6331**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0502	0.0348	0.3912	1.1300e-003	0.1369	7.0000e-004	0.1376	0.0363	6.4000e-004	0.0370		115.9565	115.9565	3.9600e-003	3.5800e-003	117.1211
Total	**0.0502**	**0.0348**	**0.3912**	**1.1300e-003**	**0.1369**	**7.0000e-004**	**0.1376**	**0.0363**	**6.4000e-004**	**0.0370**		**115.9565**	**115.9565**	**3.9600e-003**	**3.5800e-003**	**117.1211**

Chiles Plaza - Yolo/Solano AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466	0.0000	1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6112**	**5.5046**	**7.0209**	**0.0113**		**0.2643**	**0.2643**		**0.2466**	**0.2466**	**0.0000**	**1,036.0878**	**1,036.0878**	**0.3018**		**1,043.6331**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0502	0.0348	0.3912	1.1300e-003	0.1369	7.0000e-004	0.1376	0.0363	6.4000e-004	0.0370		115.9565	115.9565	3.9600e-003	3.5800e-003	117.1211
Total	**0.0502**	**0.0348**	**0.3912**	**1.1300e-003**	**0.1369**	**7.0000e-004**	**0.1376**	**0.0363**	**6.4000e-004**	**0.0370**		**115.9565**	**115.9565**	**3.9600e-003**	**3.5800e-003**	**117.1211**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.9768					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**2.1685**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Unmitigated Construction Off-Site

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

Chiles Plaza - Yolo/Solano AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.9768					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**2.1685**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

Mitigated Construction Off-Site

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.5573	2.5368	17.0678	0.0163	1.4190	0.0177	1.4367	0.3788	0.0165	0.3954		1,688.2384	1,688.2384	0.3158	0.1793	1,749.5627
Unmitigated	2.5573	2.5368	17.0678	0.0163	1.4190	0.0177	1.4367	0.3788	0.0165	0.3954		1,688.2384	1,688.2384	0.3158	0.1793	1,749.5627

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market with Gas Pumps	1,612.50	1,612.50	1612.50	650,546	650,546
General Office Building	9.74	2.21	0.70	15,434	15,434
Total	1,622.24	1,614.71	1,613.20	665,980	665,980

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Convenience Market with Gas	10.00	5.00	7.00	0.80	80.20	19.00	14	21	65
General Office Building	10.00	5.00	7.00	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market with Gas Pumps	0.508386	0.056948	0.178426	0.142719	0.032913	0.007228	0.019592	0.017032	0.000592	0.000589	0.030937	0.000618	0.004020
General Office Building	0.508386	0.056948	0.178426	0.142719	0.032913	0.007228	0.019592	0.017032	0.000592	0.000589	0.030937	0.000618	0.004020

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	5.3000e-004	4.7900e-003	4.0300e-003	3.0000e-005		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004		5.7540	5.7540	1.1000e-004	1.1000e-004	5.7882
NaturalGas Unmitigated	5.3000e-004	4.7900e-003	4.0300e-003	3.0000e-005		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004		5.7540	5.7540	1.1000e-004	1.1000e-004	5.7882

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Convenience Market with Gas Pumps	4.5253	5.0000e-005	4.4000e-004	3.7000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.5324	0.5324	1.0000e-005	1.0000e-005	0.5356
General Office Building	44.3836	4.8000e-004	4.3500e-003	3.6600e-003	3.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004		5.2216	5.2216	1.0000e-004	1.0000e-004	5.2526
Total		**5.3000e-004**	**4.7900e-003**	**4.0300e-003**	**3.0000e-005**		**3.6000e-004**	**3.6000e-004**		**3.6000e-004**	**3.6000e-004**		**5.7540**	**5.7540**	**1.1000e-004**	**1.1000e-004**	**5.7882**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Convenience Market with Gas Pumps	0.0045253	5.0000e-005	4.4000e-004	3.7000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.5324	0.5324	1.0000e-005	1.0000e-005	0.5356
General Office Building	0.0443836	4.8000e-004	4.3500e-003	3.6600e-003	3.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004		5.2216	5.2216	1.0000e-004	1.0000e-004	5.2526
Total		**5.3000e-004**	**4.7900e-003**	**4.0300e-003**	**3.0000e-005**		**3.6000e-004**	**3.6000e-004**		**3.6000e-004**	**3.6000e-004**		**5.7540**	**5.7540**	**1.1000e-004**	**1.1000e-004**	**5.7882**

6.0 Area Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0393	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3100e-003	1.3100e-003	0.0000		1.4000e-003
Unmitigated	0.0393	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3100e-003	1.3100e-003	0.0000		1.4000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.7100e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0365					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3100e-003	1.3100e-003	0.0000		1.4000e-003
Total	**0.0393**	**1.0000e-005**	**6.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.3100e-003**	**1.3100e-003**	**0.0000**		**1.4000e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.7100e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0365					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3100e-003	1.3100e-003	0.0000		1.4000e-003
Total	**0.0393**	**1.0000e-005**	**6.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.3100e-003**	**1.3100e-003**	**0.0000**		**1.4000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

IPaC **U.S. Fish & Wildlife Service**

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.

Project information

NAME

Chiles Plaza

LOCATION

Yolo County, California

DESCRIPTION

Some(Gas Station, Drive-through Car Wash, Office & Restaurant Uses)

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. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species[1] 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[2]).

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:

Birds

NAME	STATUS

Western Snowy Plover Charadrius nivosus nivosus — Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.
http://ecos.fws.gov/ecp/species/8035

Reptiles

NAME	STATUS

Giant Garter Snake Thamnophis gigas — Threatened

Wherever found

No critical habitat has been designated for this species.
http://ecos.fws.gov/ecp/species/4482

Amphibians

NAME	STATUS

California Red-legged Frog Rana draytonii — Threatened

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.
http://ecos.fws.gov/ecp/species/2891

California Tiger Salamander Ambystoma californiense — Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.
http://ecos.fws.gov/ecp/species/2076

Fishes

NAME	STATUS

Delta Smelt Hypomesus transpacificus — Threatened

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.
http://ecos.fws.gov/ecp/species/321

Insects

NAME	STATUS

Monarch Butterfly Danaus plexippus — Candidate

Wherever found

No critical habitat has been designated for this species.
http://ecos.fws.gov/ecp/species/9743

NAME	STATUS
Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. http://ecos.fws.gov/ecp/species/7850	Threatened

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp Branchinecta conservatio Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. http://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp Branchinecta lynchi Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. http://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp Lepidurus packardi Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. http://ecos.fws.gov/ecp/species/2246	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[1] and the Bald and Golden Eagle Protection Act[2].

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 ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Black Tern Chlidonias niger This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. http://ecos.fws.gov/ecp/species/3093	Breeds May 15 to Aug 20

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.

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
http://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.
http://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.
http://ecos.fws.gov/ecp/species/9464

Long-eared Owl asio otus — Breeds Mar 1 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
http://ecos.fws.gov/ecp/species/3631

Marbled Godwit Limosa fedoa — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
http://ecos.fws.gov/ecp/species/9481

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
http://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.
http://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.
http://ecos.fws.gov/ecp/species/3914

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
http://ecos.fws.gov/ecp/species/9480

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.
http://ecos.fws.gov/ecp/species/3910

Willet Tringa semipalmata — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

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.
http://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.

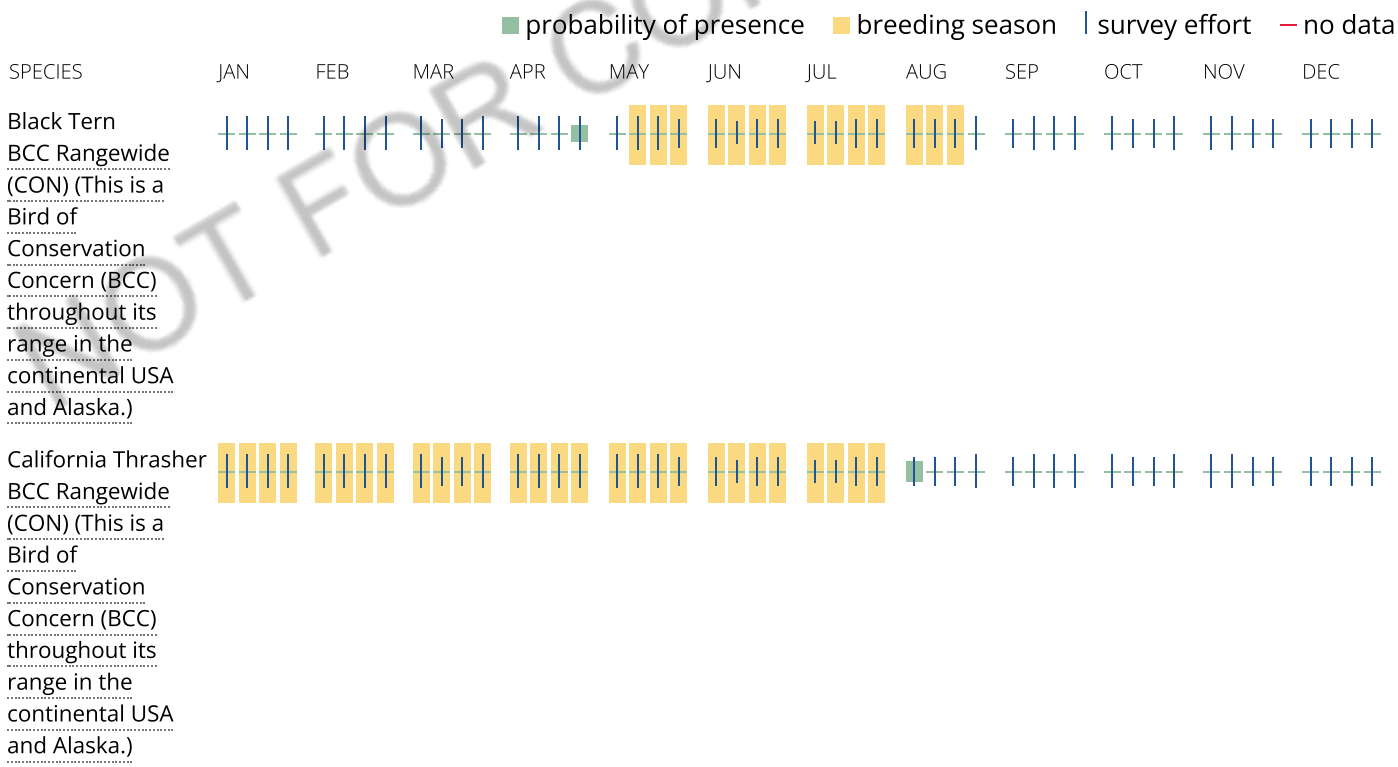
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

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.

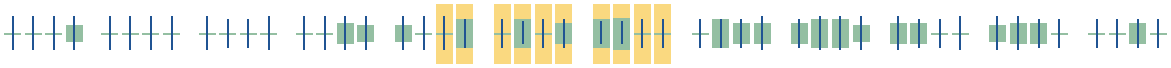
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

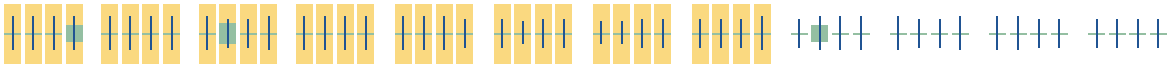
Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Common Yellowthroat BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

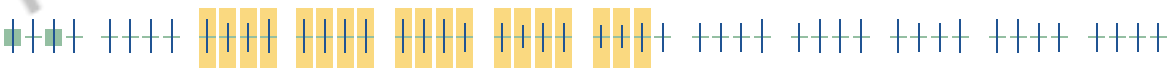


Golden Eagle Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)

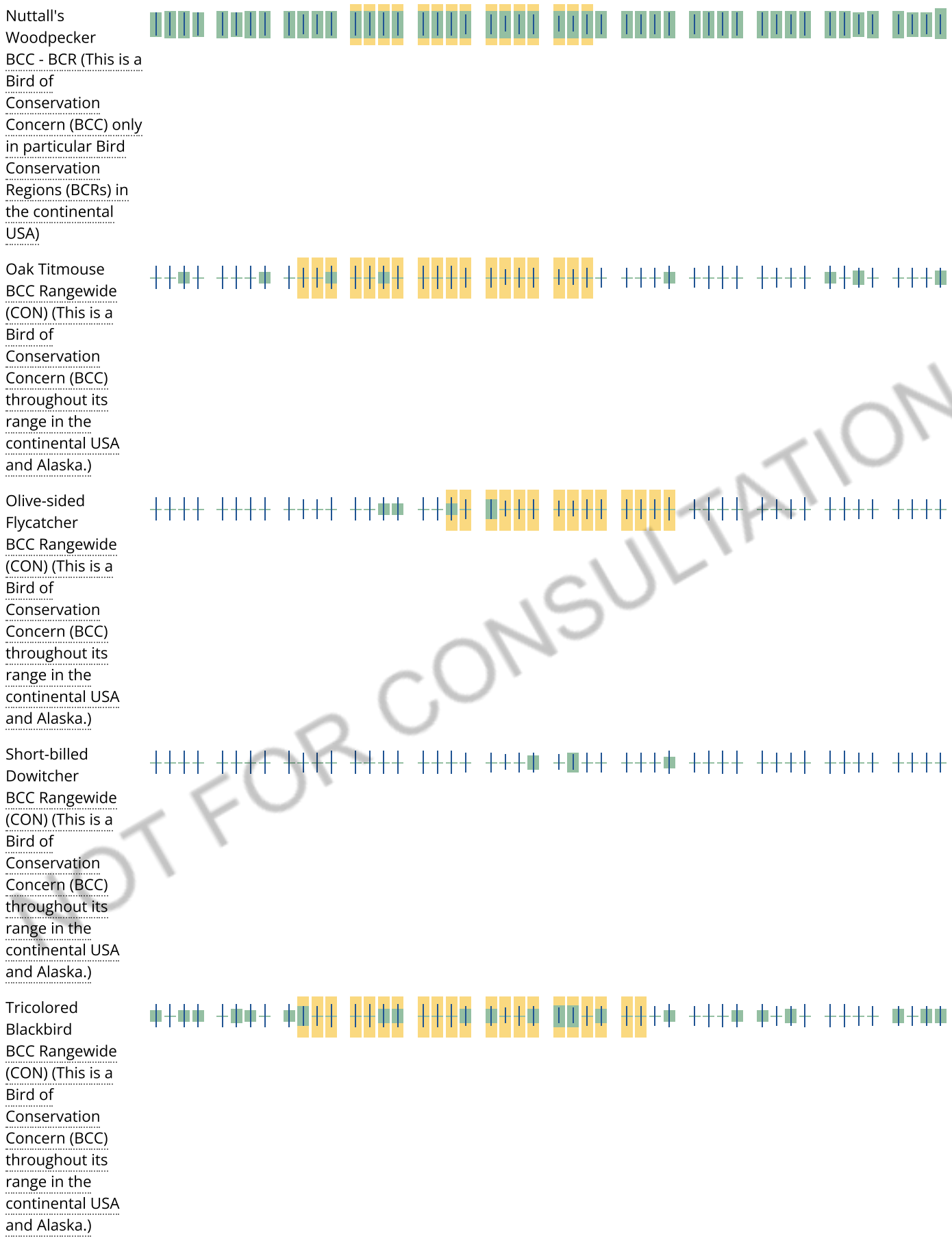


Lawrence's Goldfinch BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Long-eared Owl BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

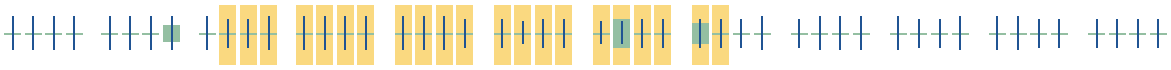


Marbled Godwit BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

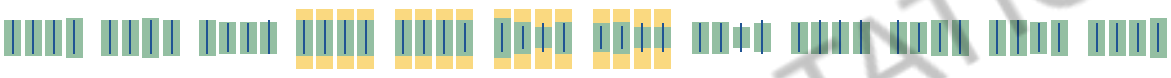


Willet BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Wrentit BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Yellow-billed Magpie BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



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 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, 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.

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

Wildlife refuges and fish hatcheries

REFUGE AND FISH HATCHERY INFORMATION IS NOT AVAILABLE AT THIS TIME

Wetlands in the National Wetlands Inventory

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.

THERE ARE NO KNOWN 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 tuberficid 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.

Environmental Noise Assessment

4810 Chiles Road Gas Station Car Wash

City of Davis, California

November 19, 2021

Project #210106

Prepared for:

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INTRODUCTION

The Chiles Road Gas Station Car Wash project is located near the southeast corner of the intersection of Chiles Road and Mace Boulevard in the City of Davis, California.

The City of Davis has requested that an acoustical analysis be prepared to analyze potential noise impacts associated with the gas station and car wash operations. Therefore, this analysis will predict the noise generation associated with these uses and will seek to achieve compliance with the applicable City of Davis General Plan Noise Element goals and policies as well as City noise ordinances.

Figure 1 shows the project site plan. **Figure 2** shows an aerial photo of the project site.

ENVIRONMENTAL SETTING

BACKGROUND INFORMATION ON NOISE

Fundamentals of Acoustics

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

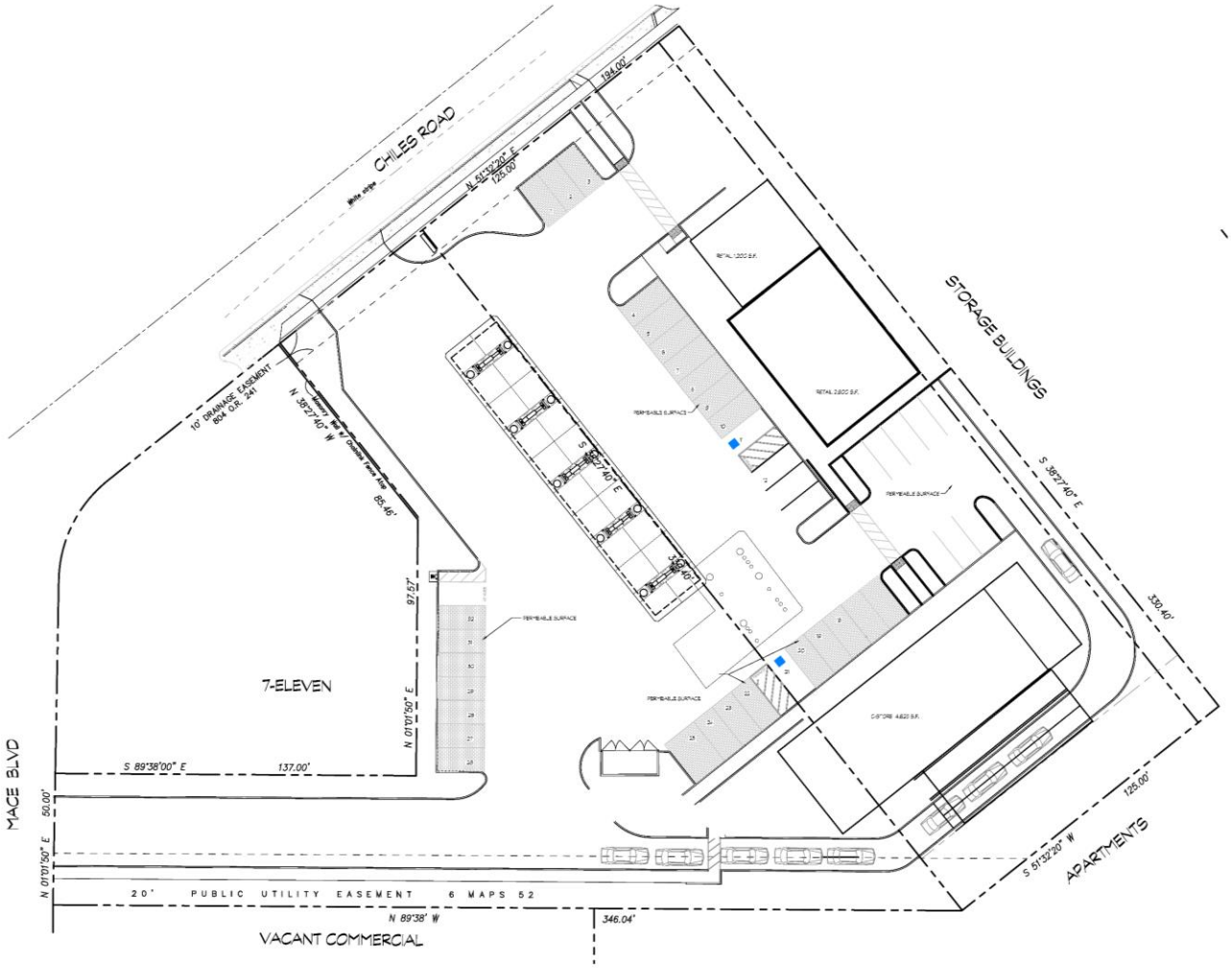
The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels, but are expressed as dB, unless otherwise noted.

4810 Chiles Road Gas Station Car Wash

City of Davis, California

Figure 1

Project Site Plan



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4810 Chiles Road Gas Station Car Wash

City of Davis, California

Figure 2

Noise Measurement Sites

Legend

- Project Site
- Noise Measurement Site - Long Term

25 ft 75 ft 125 ft

Projection: State Plane (California Zone 2) / NAD83 / meters
Rev. Date: 02/04/2021

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The decibel scale is logarithmic, not linear. In other words, two sound levels 10-dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10-dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound, and twice as loud as a 60 dBA sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool is the average, or equivalent, sound level (L_{eq}), which corresponds to a steady-state A weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptor, L_{dn}, and shows very good correlation with community response to noise.

The day/night average level (L_{dn}) is based upon the average noise level over a 24-hour day, with a +10-decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it tends to disguise short-term variations in the noise environment.

Table 1 lists several examples of the noise levels associated with common situations. **Appendix A** provides a summary of acoustical terms used in this report.

TABLE 1: TYPICAL NOISE LEVELS

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft.)	--100--	
Gas Lawn Mower at 1 m (3 ft.)	--90--	
Diesel Truck at 15 m (50 ft.), at 80 km/hr. (50 mph)	--80--	Food Blender at 1 m (3 ft.) Garbage Disposal at 1 m (3 ft.)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft.)	--70--	Vacuum Cleaner at 3 m (10 ft.)
Commercial Area Heavy Traffic at 90 m (300 ft.)	--60--	Normal Speech at 1 m (3 ft.)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing
Source: Caltrans, Technical Noise Supplement, Traffic Noise Analysis Protocol. September, 2013.		

Effects of Noise on People

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction
- Interference with activities such as speech, sleep, and learning
- Physiological effects such as hearing loss or sudden startling

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it.

With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1-dBA cannot be perceived;
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference;
- A change in level of at least 5-dBA is required before any noticeable change in human response would be expected; and
- A 10-dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6-dB per doubling of distance from the source, depending on environmental conditions (i.e. atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

EXISTING AMBIENT NOISE LEVELS

The existing ambient noise environment in the project vicinity is primarily defined by traffic on the local roadways adjacent to the project site, including Mace Boulevard and Chiles Road.

To quantify the existing ambient noise environment in the project vicinity, Saxelby Acoustics conducted a continuous (24-hr.) noise level measurement at one location near the project site. The noise measurement location is shown on **Figure 2**. A summary of the noise level measurement survey results is provided in **Table 2**. **Appendix B** contains the complete results of the noise monitoring.

The sound level meter was programmed to record the maximum, median, and average noise levels during the survey. The maximum value, denoted L_{max}, represents the highest noise level measured. The average value, denoted L_{eq}, represents the energy average of all of the noise received by the sound level meter microphone during the monitoring period. The median value, denoted L_{50}, represents the sound level exceeded 50 percent of the time during the monitoring period.

A Larson Davis Laboratories (LDL) model 812 integrating sound level meter was used for the ambient noise level measurement survey. The meter was calibrated before and after use with a B&K Model 4230 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

TABLE 2: SUMMARY OF EXISTING BACKGROUND NOISE MEASUREMENT DATA

Site	Date	Average Measured Hourly Noise Levels, dBA						
			Daytime (7:00 am - 10:00 pm)			Nighttime (10:00 pm – 7:00 am)		
		CNEL/L_{dn}	L_{eq}	L_{50}	L_{max}	L_{eq}	L_{50}	L_{max}
LT-1	2/4/21	64	62	57	72	57	55	67
Source: Saxelby Acoustics – 2021								

REGULATORY CONTEXT

FEDERAL

There are no federal regulations related to noise that apply to the Proposed Project.

STATE

There are no state regulations related to noise that apply to the Proposed Project.

LOCAL

City of Davis General Plan

The Davis General Plan goals and policies relating to noise and vibration that are applicable to the proposed project are presented in **Table 3** and **Table 4**.

TABLE 3: STANDARDS FOR EXTERIOR NOISE EXPOSURE

Land Use Category	Community Noise Exposure Ldn or CNEL, dBA			
	Normally Acceptable	Conditionally Acceptable	Unacceptable	Clearly Unacceptable
Residential	Under 60	60 to 70*	70 to 75	Above 75
Transient Lodging - Motels, Hotels	Under 60	65 to 75	75 to 80	Above 80
Schools, Libraries, Churches, Hospitals, Nursing Homes	Under 60	60 to 70	70 to 80	Above 80
Auditoriums, Concert Halls, Amphitheaters	Under 50	50 to 70	N/A	Above 70
Sports Arenas, Outdoor Spectator Sports	N/A	Under 75	N/A	Above 75
Playgrounds, Neighborhood Parks	Under 70	N/A	70 to 75	Above 75
Golf Courses, Riding Stables, Water Recreation, Cemeteries	Under 70	N/A	70 to 80	Above 80
Office Buildings, Business Commercial and Professional	Under 65	65 to 75	Above 75	N/A
Industrial, Manufacturing, Utilities, Agriculture	Under 65	70 to 80	Above 80	N/A

Notes:
Normally Acceptable: Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without special noise insulation requirements.
Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is conducted, and needed noise attenuation features are included in the construction or development.
Normally Unacceptable: New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be conducted and needed noise attenuation features shall be included in the construction or development.
Clearly Unacceptable: New construction or development shall not be undertaken.
N/A: Not applicable
* The City Council shall have discretion within the "conditionally acceptable" range for residential use to allow levels in outdoor spaces to go up to 65 dBA if cost effective or aesthetically acceptable measures are not available to reduce noise levels in outdoor spaces to the "normally acceptable" levels. Outdoor spaces which are designed for visual use only (for example, streetside landscaping in an apartment project), rather than outdoor use space may be considered acceptable up to 70 dBA.

Source: City of Davis. Davis General Plan. Table 19. Adopted May 2001. Amended through January 2007.

TABLE 4: STANDARDS FOR INTERIOR NOISE LEVELS

Use	Noise Level (dBA)
Residences, schools through grade 12, hospitals and churches	45
Offices	55

Source: City of Davis. Davis General Plan. Table 20. Adopted May 2001. *Amended through January 2007.*

City of Davis Noise Ordinance

Section 24 of the City of Davis Municipal Code establishes a maximum noise level standard of 55 dB during the hours of 7:00 AM to 9:00 PM, and 50 dB during the hours of 9:00 PM to 7:00 AM. Section 24.02.030 increases these limits by 20 dBA. Therefore, it is interpreted that the City's maximum noise limit is 75 dBA L_{max} for the hours of 7:00 AM to 9:00 PM and 70 dBA L_{max} during the house of 9:00 PM to 7:00 AM.

The Municipal Code makes exemptions for certain typical activities which may occur within the City. The exemptions are listed in Article 24.02.040, Special Provisions, and are summarized below:

a) Normal operation of power tools for non-commercial purposes are typically exempted between the hours of 8 AM and 8 PM unless the operation unreasonably disturbs the peace and quiet of any neighborhood.

b) Construction or landscape operations would be exempt during the hours of 7 AM to 7 PM Mondays through Fridays and between the hours of 8 AM to 8 PM Saturdays and Sundays assuming that the operations are authorized by valid city permit or business license, or carried out by employees or contractors of the city and one of the following conditions apply:

(1) No individual piece of equipment shall produce a noise level exceeding eighty-three dBA at a distance of twenty-five feet. If the device is housed within a structure on the property, the measurement shall be made outside the structure at a distance as close to twenty feet from the equipment as possible.

(2) The noise level at any point outside of the property plane of the project shall not exceed eighty-six dBA.

(3) The provisions of subdivisions (1) and (2) of this subsection shall not be applicable to impact tools and equipment; provided, that such impact tools and equipment shall have intake and exhaust mufflers recommended by manufacturers thereof and approved by the director of public works as best accomplishing maximum noise attenuation, and that pavement breakers and jackhammers shall also be equipped with acoustically attenuating shields or shrouds recommended by the manufacturers thereof and approved by the director of public works as best accomplishing maximum noise attenuation. In the absence of manufacturer's recommendations, the director of public works may prescribe such means of accomplishing maximum noise attenuation as he or she may determine to be in the public interest.

Construction projects located more than two hundred feet from existing homes may request a special use permit to begin work at 6:00 AM on weekdays from June 15th until September 1st. No percussion type tools (such as ramsets or jackhammers) can be used before 7:00 AM. The permit shall be revoked if any noise complaint is received by the police department.

(4) No individual powered blower shall produce a noise level exceeding

seventy dBA measured at a distance of fifty feet.

(5) No powered blower shall be operated within one hundred feet radius of another powered blower simultaneously.

(6) On single-family residential property, the seventy dBA at fifty feet restriction shall not apply if operated for less than ten minutes per occurrence.

c) The City Code also exempts air conditioners, pool pumps, and similar equipment from the noise regulations, provided that they are in good working order.

d) Work related to public health and safety is exempt from the noise requirements.

e) Safety devices are exempt from the noise requirements.

f) Emergencies are exempt from the noise requirements.

In addition, Section 24 of the City of Davis Municipal Code establishes the noise violations which can be issued by the Davis Police Department. A Sound (Noise) Permit from the Police Department is required for the following uses:

- Amplified sound at any indoor or outdoor event and more than 100 people will attend; and
- Install, use or operate within the City a loudspeaker or other amplifying equipment in a fixed or moveable position or mounted upon any sound truck for purposes of giving instruction, directions, talks, addresses, lectures or transmitting music to any persons upon a street, alley, sidewalk, park, place or other outdoor property.

EVALUATION OF GAS STATION AND CAR WASH NOISE AT RESIDENTIAL RECEPTORS

The HVAC units on the convenience store and retail space roof, vehicle traffic in the gas station parking lot / fueling area, truck deliveries, car wash air blower dryers, and vacuum stations are considered to be the primary noise sources for this project. This analysis considers each of these primary noise sources along with vehicle circulation on the project site.

Based upon the datasheet for the Mark VII dryer system, the noise emissions from the proposed car wash dryers are expected to be 72 dB at a distance of 50 feet, from the exit end of the car wash and 71 dB at 50 feet from the entrance. These sound levels are based upon continuous operation. However, typically the dryers would operate no longer than 60 seconds per cycles with a maximum of approximately 13 cycles during a busy hour. Therefore, the dryers are predicted to operate for a maximum period of 13 minutes or 780 seconds in a busy hour. In order to calculate the hourly average (L_{eq}) sound level resulting from a peak hour of operation, the following equation can be used.

$$L_{eq} = SPL + 10 * (\log N_{eq}) - 35.6, \text{ dB where:}$$

SPL is the steady sound pressure level of the dryers (72 dB or 71 dB), and 10 * (log Neq) is 10 times the logarithm of the number seconds per hour that the dryers could operate (780 s), and 35.6 is 10 times the logarithm of the number seconds in an hour.

Based upon this equation, the car wash is predicted to generate average sound levels of 65.3 dB at a distance of 50 feet from the exit end of the car wash and 64.3 dB at a distance of 50 feet from the entrance of the car wash. The Lmax value associated with operation of the car wash is expected to be no more than 10 dBA higher than the Leq.

The following is a list of assumptions used for the noise modeling. The data used is based upon a combination of manufacturer's provided data and Saxelby Acoustics data from similar operations.

Rooftop HVAC Units:	Three ten-ton packaged units on the convenience store and the retail space operating continuously during the daytime, and 50% of the time at night. Manufacturer's data.
Rooftop Condensing Unit:	One ten-ton air-cooled chiller package on the convenience store and the retail space operating continuously during the daytime, and 50% of the time at night. Manufacturer's data.
Parking Lot:	300 hourly peak hour trips in the daytime (7 AM to 9 PM), @ 71 dBA SEL at 50 feet. 100 peak hour trips during nighttime hours (9 PM to 7 AM). Includes two semi-truck fuel or food delivery in the peak hour@ 85 dBA SEL at 50 feet. Saxelby Acoustics data. L_{max} values are expected to be 10 dBA higher than L_{eq} values.

Car Wash Blowers:	64-65 dBA L_{eq} and 74-75 dBA L_{max} at a distance of 50 feet during the peak hour. Manufacturer's data. Blowers to be located at least 10 feet from tunnel exit. Tunnel to be acoustically lined on ceiling and 5' down on side walls extending from tunnel exit for a distance of 20-feet inside the tunnel.
Vacuum Stations:	One canister type vacuum station at 64 dBA L_{eq} and 74 dBA L_{max} at 25 feet. Running continuously during the peak hour of usage. Manufacturer's data.

Saxelby Acoustics used the SoundPLAN noise prediction model. Inputs to the model included sound power levels for the proposed car wash tunnel, parking lot and fuel pumps, rooftop equipment, existing and proposed buildings, terrain type, and locations of sensitive receptors. These predictions are made in accordance with International Organization for Standardization (ISO) standard 9613-2:1996 (Acoustics – Attenuation of sound during propagation outdoors). ISO 9613 is the most commonly used method for calculating exterior noise propagation.

NOISE CONTROL MEASURES

To achieve compliance with the City of Davis noise level standards, a sound wall must be constructed to shield existing residential uses from project noise exposure. Saxelby Acoustics utilized the SoundPLAN noise modeling software to assess the effectiveness of sound walls of varying heights. To adequately shield the apartments to the east and south of the proposed project, a 6-foot tall wall is required.

In addition to construction of a sound wall, the vacuum station must be located in a position on the site which does not allow a direct line-of-site to existing sensitive receptors.

Figure 3 illustrates the location of the proposed sound wall and vacuum station as well as the resulting daytime (7 AM to 9 PM) L_{max} noise level contours. **Figure 4** shows the resulting nighttime (9 PM to 7 AM) L_{max} noise level contours with the sound wall. **Figure 5** shows the resulting noise levels in terms of the day/night average (L_{dn}) noise descriptor.

4810 Chiles Road Gas Station Car Wash

City of Davis, California

Figure 3

Daytime Project Noise Contours (dBA L_{max})

Noise Level, dB(A)

65	<= 65
66	<= 66
67	<= 67
68	<= 68
69	<= 69
70	<= 70

Legend

- Building
- 6-Foot Wall

Scale 1:75

0 12.5 25 50 75 100 125 150 feet

N

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Figure 4

Nighttime Project Noise Contours (dBA L_{max})

Noise Level, dB(A)

	<= 60
60 <	<= 61
61 <	<= 62
62 <	<= 63
63 <	<= 64
64 <	<= 65
65 <	

Legend

- Building
- 6-Foot Wall

Scale 1:75

0 12.5 25 50 75 100 125 150 feet

N

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Figure 5

Daytime Project Noise Contours (dBA L_{dn})

Noise Level, dB(A)

	<=	60
60 <	<=	61
61 <	<=	62
62 <	<=	
55	<=	55
56	<=	56
57		57
58		58
59		59
60		60

Legend
- Building
- 6-Foot Wall

Scale 1:75

0 12.5 25 50 75 100 125 150 feet

N

SAXELBY ACOUSTICS
Acoustics · Noise · Vibration

CONCLUSIONS

The noise analysis indicates that the proposed project will comply with the City of Davis noise ordinance nighttime (9 PM to 7 AM) noise level standard of 70 dBA $L_{max,}$ daytime (7 AM to 9 PM) noise level standard of 75 dBA $L_{max,}$ and General Plan noise level standard of 60 dBA L_{dn} at the nearest sensitive receptors, assuming a 6-foot tall sound wall is constructed on the property boundary as indicated on **Figure 3.**

These conclusions are based on the following assumptions:

- The car wash dryer used for the project shall not exceed a continuous noise level of 72 dBA at 50 feet outside the car wash tunnel entrance or exit.

- Car wash blowers to be located at least 10 feet from tunnel exit. Tunnel to be acoustically lined on ceiling and 5' down on side walls extending from tunnel exit for a distance of 20-feet inside the tunnel. Acoustic lining shall consist of Sonex Clean Baffles, or panel with equivalent acoustic performance, as outlined in **Attachment 1**.

- The vacuum station shall not exceed a noise level of 64 dBA L_{eq} at 25 feet.

- The car wash and associated vacuum station should operate only during daytime (7 AM to 9 PM) hours.

Appendix A: Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
ASTC	Apparent Sound Transmission Class. Similar to STC but includes sound from flanking paths and correct for room reverberation. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by +5 dBA and nighttime hours weighted by +10 dBA.
DNL	See definition of Ldn.
IIC	Impact Insulation Class. An integer-number rating of how well a building floor attenuates impact sounds, such as footsteps. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz (Hz).
Ldn	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
Lmax	The highest root-mean-square (RMS) sound level measured over a given period of time.
L(n)	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L50 is the sound level exceeded 50% of the time during the one-hour period.
Loudness	A subjective term for the sensation of the magnitude of sound.
NIC	Noise Isolation Class. A rating of the noise reduction between two spaces. Similar to STC but includes sound from flanking paths and no correction for room reverberation.
NNIC	Normalized Noise Isolation Class. Similar to NIC but includes a correction for room reverberation.
Noise	Unwanted sound.
NRC	Noise Reduction Coefficient. NRC is a single-number rating of the sound-absorption of a material equal to the arithmetic mean of the sound-absorption coefficients in the 250, 500, 1000, and 2,000 Hz octave frequency bands rounded to the nearest multiple of 0.05. It is a representation of the amount of sound energy absorbed upon striking a particular surface. An NRC of 0 indicates perfect reflection; an NRC of 1 indicates perfect absorption.
RT60	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
Sabin	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 Sabin.
SEL	Sound Exposure Level. SEL is a rating, in decibels, of a discrete event, such as an aircraft flyover or train pass by, that compresses the total sound energy into a one-second event.
SPC	Speech Privacy Class. SPC is a method of rating speech privacy in buildings. It is designed to measure the degree of speech privacy provided by a closed room, indicating the degree to which conversations occurring within are kept private from listeners outside the room.
STC	Sound Transmission Class. STC is an integer rating of how well a building partition attenuates airborne sound. It is widely used to rate interior partitions, ceilings/floors, doors, windows and exterior wall configurations. The STC rating is typically used to rate the sound transmission of a specific building element when tested in laboratory conditions where flanking paths around the assembly don't exist. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
Simple Tone	Any sound which can be judged as audible as a single pitch or set of single pitches.

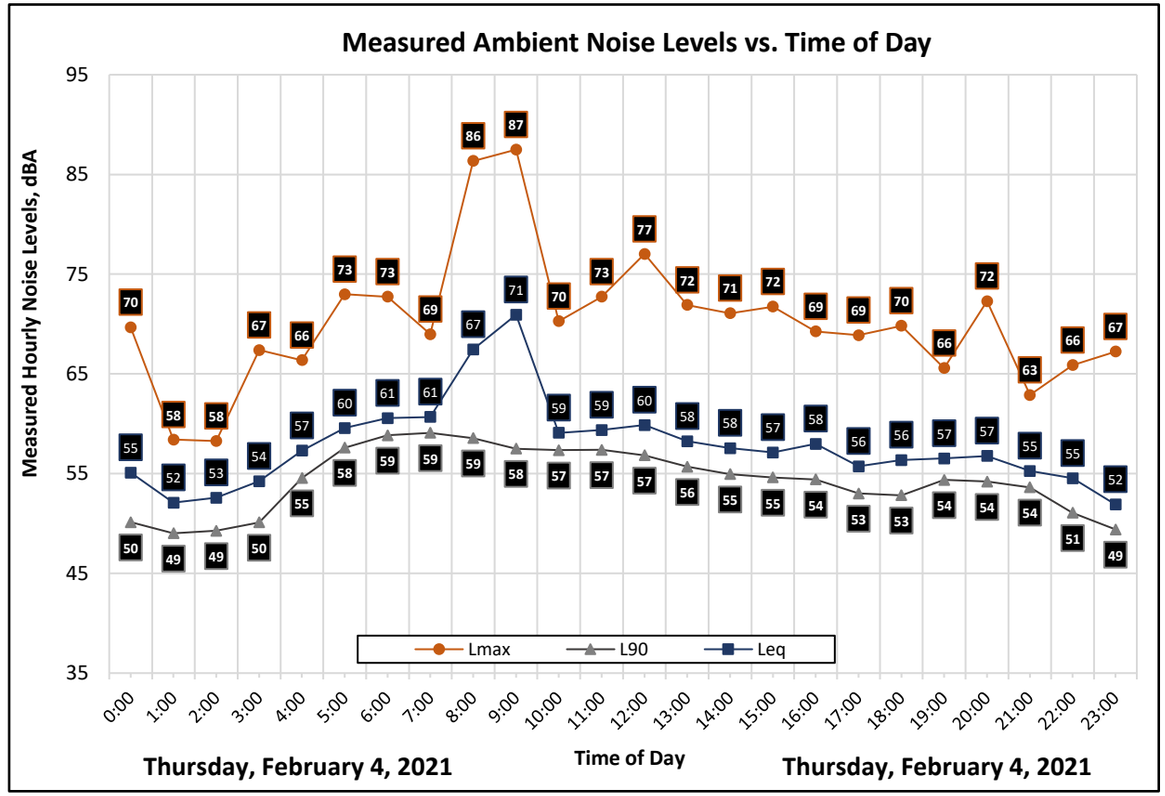
Appendix B: Continuous Ambient Noise Measurement Results

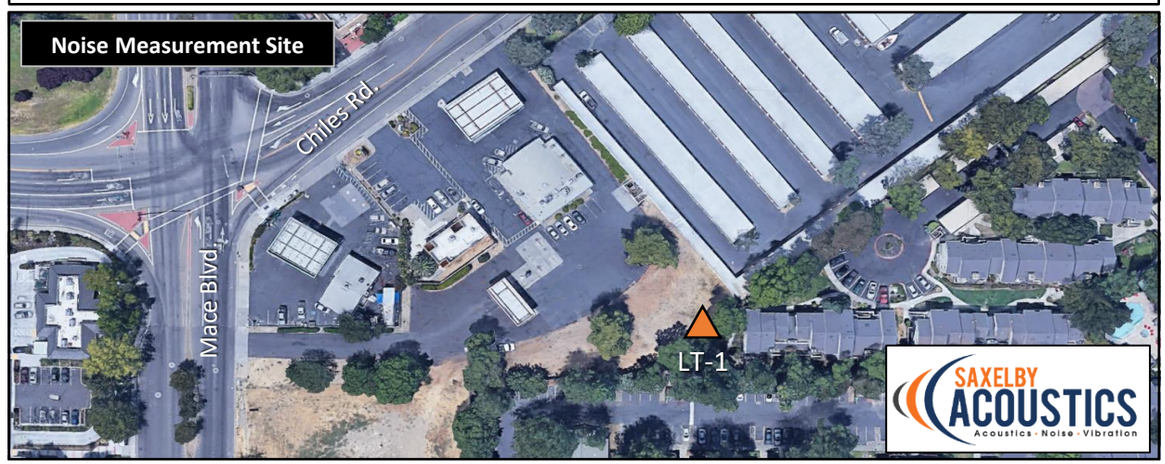
Appendix B1: Continuous Noise Monitoring Results

Site: LT-1
Project: Chiles Road Gas Station Car Wash
Location: Southeastern Project Boundary
Coordinates: 38.5500856°, -121.6927567°
Meter: LDL 812-2
Calibrator: CAL200

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Thursday, February 4, 2021	0:00	55	70	53	50
Thursday, February 4, 2021	1:00	52	58	52	49
Thursday, February 4, 2021	2:00	53	58	52	49
Thursday, February 4, 2021	3:00	54	67	53	50
Thursday, February 4, 2021	4:00	57	66	57	55
Thursday, February 4, 2021	5:00	60	73	59	58
Thursday, February 4, 2021	6:00	61	73	60	59
Thursday, February 4, 2021	7:00	61	69	60	59
Thursday, February 4, 2021	8:00	67	86	60	59
Thursday, February 4, 2021	9:00	71	87	59	58
Thursday, February 4, 2021	10:00	59	70	59	57
Thursday, February 4, 2021	11:00	59	73	59	57
Thursday, February 4, 2021	12:00	60	77	59	57
Thursday, February 4, 2021	13:00	58	72	58	56
Thursday, February 4, 2021	14:00	58	71	57	55
Thursday, February 4, 2021	15:00	57	72	56	55
Thursday, February 4, 2021	16:00	58	69	57	54
Thursday, February 4, 2021	17:00	56	69	55	53
Thursday, February 4, 2021	18:00	56	70	55	53
Thursday, February 4, 2021	19:00	57	66	56	54
Thursday, February 4, 2021	20:00	57	72	56	54
Thursday, February 4, 2021	21:00	55	63	55	54
Thursday, February 4, 2021	22:00	55	66	54	51
Thursday, February 4, 2021	23:00	52	67	51	49

Statistics	Leq	Lmax	L50	L90
Day Average	62	72	57	56
Night Average	57	67	55	52
Day Low	55	63	55	53
Day High	71	87	60	59
Night Low	52	58	51	49
Night High	61	73	60	59
Ldn	64	Day %		88
CNEL	64	Night %		12





Attachment 1:

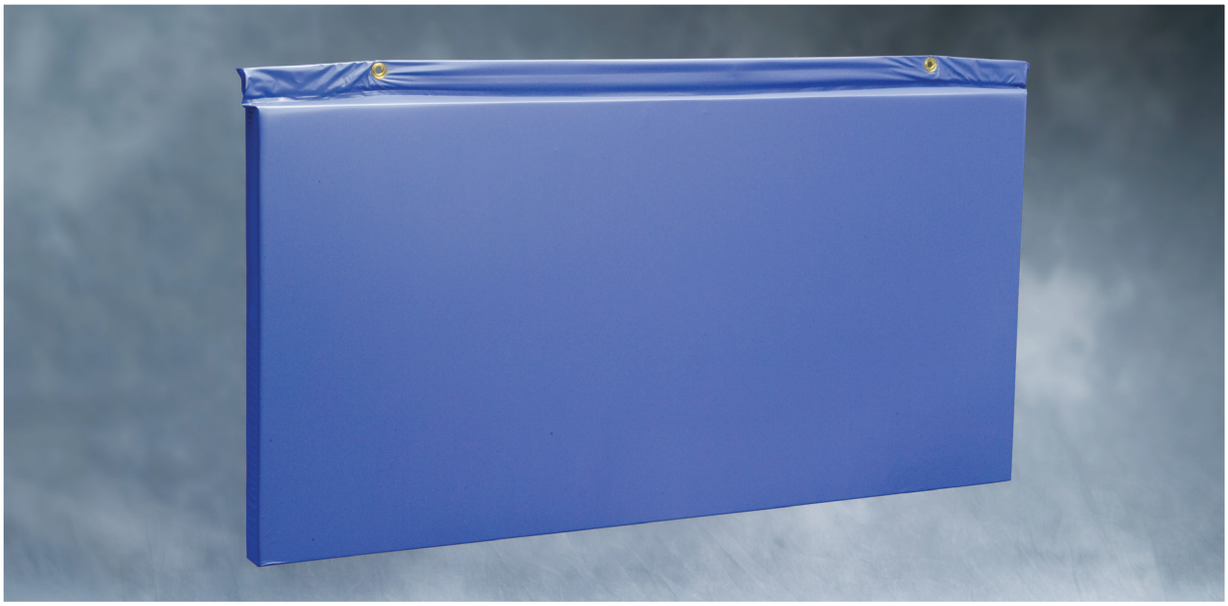
Acoustic Lining for Car Wash Tunnel

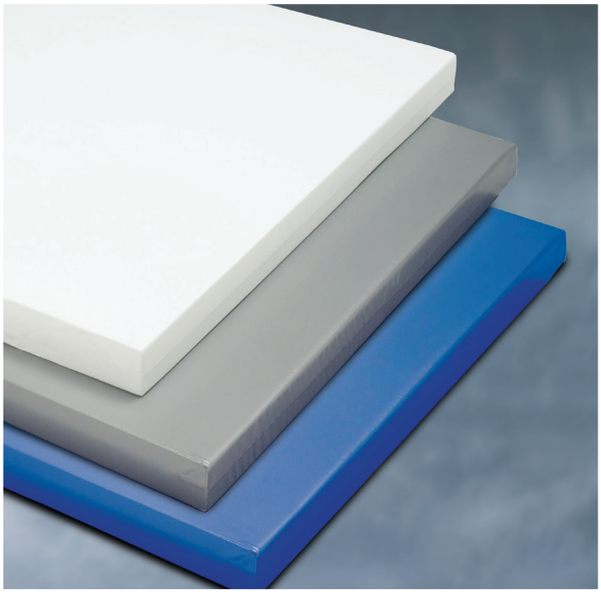
For Sales Contact:
Sharon Sullivan
Acoustic and Architectural Rep
(408) 255 8644
ssullivan@westgeneral.com
West General Acoustics + Architectural Finishes
Serving Northern California since 1975

pintaacoustic

SONEX® Clean Baffles, Panels and Ceiling Tiles

Product Information





SONEX® Clean products are designed for environments that require excellent noise control across all sound frequencies using washable acoustic materials. Suitable for direct-apply, glue-up, suspended ceiling panel and baffle applications, the products are fully encapsulated in FR taffeta vinyl for efficient cleaning and long-lasting durability. SONEX Clean products meet USDA/FDA requirements.

>> Advantages

- Superior sound absorption minimizes reverberation and echo
- FR Taffeta vinyl is available in 17 standard colors
- Naturally resistant to mold, fungus and bacteria growth, Sonex clean products can withstand high heat and humidity

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pintaacoustic

SONEX® Clean Baffles, Panels and Ceiling Tiles

Product Information

Material

- Made from lightweight, non-fibrous WILLTEC® expanded melamine foam core
- Fully encapsulated in FR taffeta vinyl
- Reseal tape is included

Sizes

- Direct-apply, glue-up panels: 24" x 48" x 2" (610 x 1219 x 51 mm)
- Suspended ceiling panels: 23-¾" x 23-¾" x 2" or 23-¾" x 47-¾" x 2" (603 x 603 x 51 or 603 x 1213 x 51 mm)
- Suspended baffles: 26" x 48" x 2" (660 x 1219 x 51 mm) includes 2" (51 mm) top tab height

Application

- Clean rooms, scientific and medical research labs
- Aerospace and optics manufacturing facilities
- Bottling and food processing plants
- Commercial kitchens
- Indoor swimming pools

Installation

Direct-Apply, Glue-Up Panels

- Use pinta's PA-02 or PA-04 acouSTIC adhesive, mock-up to test for best adhesion recommended
- SONEX Clean resealing tape available for cut-to-fit panel conditions onsite

Suspended Ceiling Panels

- Fits within most standard 15/16" (24 mm) ceiling grid system

Suspended Baffles

- Produced with integral grommets along top tabs to easily loop suspension wire through

Physical Data—WILLTEC® Core

Material ASTM G21	Open-cell melamine-based foam
Density	0.5 to 0.7 lbs./cu. ft. (ASTM D3574-77)
Long-Term Service Temperature	302° F (150° C)
Flame Spread and Smoke Density	Passes Class A per ASTM E 84 Passes CAN ULCS-102
Microbial Growth	Passes UL 181, section 11
Fungus Resistance	Rating 0 per ASTM G21

Sound Absorption—Ceiling Tiles

Thickness	Test ASTM C423-07; Mounting Type E						
	125Hz	250Hz	500Hz	1KHz	2KHz	4KHz	NRC
2" (51 mm)	0.57	0.67	0.91	0.90	0.43	0.19	0.75

Sound Absorption—Wall Panels

Thickness	Test ASTM C423-07; Mounting Type A						
	125Hz	250Hz	500Hz	1KHz	2KHz	4KHz	NRC
2" (51 mm)	0.18	0.75	1.21	0.82	0.40	0.25	0.80

Sound Absorption—Baffles

Thickness	Sabins per Baffle per ASTM C423-07; Hanging Baffle						
	125Hz	250Hz	500Hz	1KHz	2KHz	4KHz	Average
2" (51 mm)	1.88	5.23	10.33	11.84	5.33	2.99	8.20

Please consult pinta acoustic with any questions prior to the start of your specific project application.

>> Other Products

- Direct-Apply Ceiling and Wall Panels
- Suspended Ceiling Clouds and Baffles
- Suspended Grid Lay-in Panels
- Barriers, Foam and Composites

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FEHR PEERS

Memorandum

Date: May 25, 2022

To: Kurt Wagenknecht, K12 Architects, Inc.

From: Greg Behrens, Fehr & Peers

Subject: Traffic Study for 4810 Chiles Road

RS20-3918

This memorandum documents the transportation and site access analysis of the proposed project at 4810 Chiles Road, located on the south side of Chiles Road east of Mace Boulevard in Davis, California. The project would include a gas station with 10 vehicle fueling positions, a convenience store comprised of 4,069 square feet, retail/office space comprised of 4,791 square feet, and a car wash.

This memorandum is organized into the following sections:

- Existing Conditions
- Existing Plus Project Conditions
- Project Access & On-Site Circulation

Existing Conditions

Project Site Setting

Figure 1 shows the project site location. The site is currently occupied by a gas station with 14 vehicle fueling positions (12 gas and 2 truck fueling positions), a convenience store, and a Subway restaurant. The site is currently accessible from Mace Boulevard via a right-in/right-out driveway and from Chiles Road via three full access driveways.

Near the project site, Chiles Road is two lanes and Mace Boulevard is four lanes. Both roads have a posted speed limit of 35 miles per hour (MPH). The Mace Boulevard/Chiles Road intersection is signalized and includes channelized right-turn lanes in the northbound, southbound, and eastbound direction.

The Interstate 80 (I-80)/Mace Boulevard interchange is located a short distance north of the project site. The interchange includes on- and off-ramps for both eastbound and westbound travel on I-80.

Figure 1

Study Area

Bus stops are located on both sides of Chiles Road along the project frontage. The bus stops are served by Unitrans Routes A and T and Yolobus Routes 42A, 42B, 44, and 232. Yolobus utilizes the eastbound stop as a layover/recovery location for its intercity routes. There are sidewalks on both sides of Chiles Road and Mace Boulevard. Class II bike lanes are provided in both directions on Chiles Road and Mace Boulevard. The westbound Chiles Road bike lane ends approximately 340 feet east of the Mace Boulevard/Chiles Road intersection.

Methodology

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

This study analyzes peak hour operations at the following intersections:

1. Mace Boulevard/Alhambra Drive
2. Mace Boulevard/Second Street/County Road 32A (CR 32A)
3. Mace Boulevard/I-80 Westbound Ramps
4. Mace Boulevard/Chiles Road
5. Chiles Road/I-80 Eastbound Ramps
6. Mace Boulevard/Cowell Boulevard
7. Mace Boulevard/North El Macero Drive

Traffic operations at these intersections were analyzed using SimTraffic 11 simulation software, which accounts for interactions between intersections, queue spillback, vehicle platooning, etc. The program also produces more accurate estimates of vehicular queuing (when compared to more deterministic methods).

The 4810 Chiles Road project traffic study dated March 2021 utilizes an older version of the SimTraffic model that represents the Mace Boulevard corridor and adjoining roadways. This study utilizes a newer version of the SimTraffic model that was updated for the existing conditions traffic operations analyses prepared for the DiSC 2022 project and the Davis Express Car Wash project. This model built off of the SimTraffic 10 model prepared for the DISC EIR (2020) by updating the model to SimTraffic 11 and incorporating model refinements for the roadway network within the immediate vicinity of the project site. In addition to the study intersections, the SimTraffic model includes nearby driveways (e.g., the El Macero Shopping Center driveway on the west side of Mace Boulevard) and all ramps at the I-80/Mace Boulevard interchange.

Applicable LOS Policies

Per the *City of Davis General Plan Transportation Element*, LOS E is the minimum acceptable LOS for City-operated study intersections (study intersections 1, 2, 4, 6, and 7).

Per the *Caltrans District 3 Interstate 80 Transportation Concept Report* (TCR) (August 2017), the horizon year LOS for I-80 within the study area (including the ramp terminal intersections at study intersections 3 and 5) is LOS F. It is important to note that in light of SB 743 and as described in the *Caltrans VMT-Focused Transportation Impact Study Guide* (May 2020), Caltrans has transitioned away from requesting LOS or other vehicle operations analyses of land use projects. Instead, Caltrans review of land use projects and plans is focused on a VMT metric, consistent with changes to the CEQA Guidelines resulting from SB 743.

Data Collection

This study analyzes the project's impacts during the weekday PM peak hour. This hour was chosen over other hours (e.g., morning or weekend peaks) for several reasons. Data shows volumes and delay on Mace Boulevard are greater during this period than others. Trip generating land uses near the project site are generally busier during the evening versus morning peak hour. Finally, trips generated by the proposed project would be similar during both the morning and evening peak hours. Hence, analysis of the project for weekday PM peak hour conditions provides a worst-case assessment of potential off-site impacts and on-site project access needs.

Intersection turning movement counts were conducted during the AM and PM peak periods on Thursday, May 30, 2019 and Thursday, October 16, 2019. Intersection counts included volumes for vehicles, bicyclists, and pedestrians. During the traffic counts and field observations, local schools and UC Davis were in regular session and weather conditions were dry and clear. Additionally, Fehr & Peers conducted peak period field observations at project site driveways in February and June 2020.

Intersection Operations

Table 1 displays the existing peak hour delay and level of service at the study intersections.

All intersections currently operate at LOS C or better during the AM peak hour, with traffic generally progressing smoothly and most motorists experiencing little delay as they progress through signalized intersections.

Considerable delay and queueing occur during the weekday PM peak hour, with a few intersections operating at LOS F. Two of these intersections — Mace Boulevard/Cowell Boulevard and Mace Boulevard/North El Macero Drive — are owned and operated by the City of Davis and do not meet the City of Davis General Plan LOS policy (maintain LOS E or better). These conditions can be attributed to several factors, including the prevalence of diverted regional traffic from eastbound I-80 onto local study area roadways, as well as the existing ramp metering at the eastbound I-80 on-ramps from Mace Boulevard. These conditions are particularly prevalent on Wednesday, Thursday, and Friday afternoons and evenings.

During the PM peak period traffic counts, field observations indicated that congested conditions were present on both eastbound I-80 and local roadways surrounding the Mace Boulevard interchange. Stacked vehicles were observed on southbound Mace Boulevard from the eastbound I-80 on-ramp to beyond Alhambra Drive, on northbound Mace Boulevard from the eastbound I-80 on-ramp to beyond San Marino Drive, and on eastbound Chiles Road from Mace Boulevard to the Hanlees Davis Toyota car dealership/service center. This is reflected in the LOS E and LOS F conditions reported during the weekday PM peak hour.

Table 1: Peak Hour Intersection Operations – Existing Conditions

Intersection	Jurisdiction	Traffic Control[1]	AM Peak Hour		PM Peak Hour	
			Delay[2]	LOS[3]	Delay[2]	LOS[3]
1. Mace Boulevard/Alhambra Drive	City of Davis	Signal	17	B	20	B
2. Mace Boulevard/Second Street/CR 32A	City of Davis	Signal	34	C	36	D
3. Mace Boulevard/I-80 Westbound Ramps	Caltrans	Signal	20	C	65	E
4. Mace Boulevard/Chiles Road	City of Davis	Signal	33	C	80	E
5. Chiles Road/I-80 Eastbound Ramps	Caltrans	Signal	11	B	89	F
6. Mace Boulevard/Cowell Boulevard	City of Davis	Signal	11	B	**103**	**F**
7. Mace Boulevard/North El Macero Drive	City of Davis	AWSC	8	A	**113**	**F**

Notes:

1. "Signal" represents an intersection that operates with a traffic signal. "AWSC" represents an intersection with all-way stop control.
2. Delay is reported as seconds per vehicle. Values are rounded to the nearest whole number so the same delay may represent two different LOS conditions if the delay is within 0.5 seconds of the LOS threshold. Average control delay for signalized and all-way stop-controlled intersections is the weighted average for all movements.
3. "LOS" represents level of service, calculated based on methodologies contained in the *Highway Capacity Manual*, *6th Edition* (Transportation Research Board, 2016).

Source: Fehr & Peers, 2022.

Existing Plus Project Conditions

Figure 2 shows the project site plan (*Chiles Plaza Site Plan*, K12 Architects, February 2, 2021). The proposed project would consist of a gas station with 10 vehicle fueling positions, a convenience store comprised of 4,069 square feet, retail/office space comprised of 4,791 square feet, and a car wash. Except for Subway, the project applicant has not identified specific site tenants at this time. The project would reconfigure vehicular access via Chiles Road by reducing the number of Chiles Road project site driveways from three to two. The existing Mace Boulevard driveway would remain as-is.

The site is currently occupied by a gas station with 14 vehicle fueling positions (12 gas and 2 truck fueling positions), a 3,600 square-foot convenience store, and a 1,650 square-foot Subway restaurant. These uses would be demolished as part of the project. Thus, relative to the existing site uses, the project would entail the following changes:

- Reduction of the number of gas station fueling positions by 2 gas fueling positions and 2 truck fueling positions
- Addition of 459 square feet to the convenience store
- Addition of 3,141 square feet of retail/office space
- Addition of a car wash

The project travel characteristics estimates described below reflect these "net" changes to the on-site uses that would result from the project.

Travel Characteristics

Trip Generation

Table 2 shows the estimated project vehicle trip generation, developed based on the following data sources:

- **Gas Station and Convenience Store** – For the gas station and associated convenience store, the trip generation is based on the data and information provided in the *Trip Generation Manual, 10th Edition* (Institute of Transportation Engineers (ITE), 2017). The "853 – Convenience Market with Gasoline Pumps" land use category was used to estimate the PM peak hour trips for the site. This land use category provides trip rates for convenience stores with gas pumps based on the size of the convenience store. Accordingly, because the project would increase the size of the convenience store, the project would increase the number of project site vehicle trips associated with the gas station and convenience store relative to existing conditions.
- **Retail/Office Space** – For the remaining retail/office space, the trip generation is based on the allocation of space identified in the retail floor plan (*Chiles Plaza Retail Floor Plan*, K12 Architects, February 2, 2021) and associated trip rates identified in the *Trip Generation Manual, 10th Edition*. The 4,791 square foot retail/office space would be comprised of the following uses:
    - Subway – 1,100 square feet
    - Office/retail space – 1,667 square feet

- Office space – 2,024 square feet

- The "933 – Fast-Food Restaurant without Drive-Through Window" ITE land use category was used to estimate the PM peak hour trips for the 1,100 square-foot Subway restaurant. The "930 – Fast Casual Restaurant" ITE land use category was used to estimate the PM peak hour trips for the 1,667 square-foot office/retail space. The "710 – General Office Building" ITE land use category was used to estimate the PM peak hour trips for the 2,024 square-foot office space.

Table 2 includes reductions for internal, pass-by, and diverted trips. Pass-by and diverted trips are trips already on the network that are diverted to and from a commercial or retail land use, and therefore would not be considered as new trips generated by the project. Pass-by and diverted trips were estimated from data presented in the *Trip Generation Handbook, 3rd Edition* (Institute of Transportation Engineers, 2017).

Note that the proposed removal of the existing truck fueling positions would eliminate heavy truck refueling activity at the project site and associated heavy truck trips on the surrounding roadway network.

Table 2: Project Trip Generation

Land Use	Quantity	Units	PM Peak Hour		
			In	Out	Total
Project Site – Existing Conditions					
Convenience Market with Gasoline Pumps [1]	3,600	Square feet	88	88	176
Fast-Food Restaurant without Drive-Through [2]	1,650	Square feet	24	24	48
		Total Gross Trips	**112**	**112**	**224**
		Internal Trip Reduction [3]	*-3*	*-3*	*-6*
		Total Gross External Trips	**109**	**109**	**218**
		Pass-By Trip Reduction for Convenience Market with Gasoline Pumps (66%) [4]	*-57*	*-57*	*-114*
		Pass-By Trip Reduction for Fast-Food Restaurant without Drive-Through (50%) [4]	*-11*	*-11*	*-22*
		Diverted Trip Reduction for Convenience Market with Gasoline Pumps (17%) [5]	*-15*	*-15*	*-30*
		Net External Trips	**26**	**26**	**52**
Project Site – Existing Plus Project Conditions					
Convenience Market with Gasoline Pumps [1]	4,069	Square feet	101	101	202
Fast-Food Restaurant without Drive-Through [2]	1,100	Square feet	16	16	32
Fast Casual Restaurant [6]	1,667	Square feet	34	39	73
General Office Building [7]	2,024	Square feet	0	3	3
		Total Gross Trips	**151**	**159**	**310**
		Internal Trip Reduction [3]	*-11*	*-11*	*-22*
		Total Gross External Trips	**140**	**148**	**288**

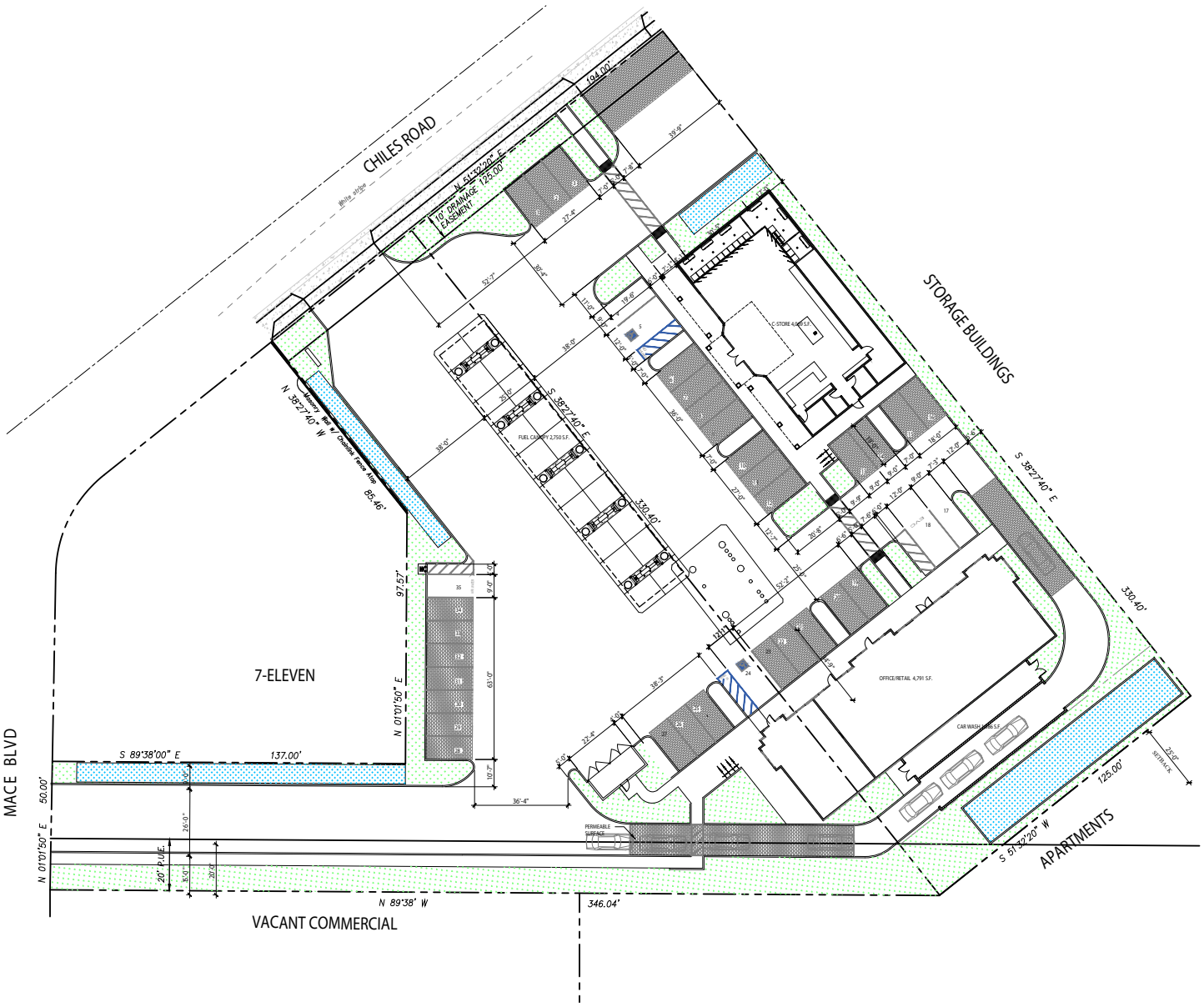
Table 2: Project Trip Generation

Land Use	Quantity	Units	PM Peak Hour		
			In	Out	Total
Pass-By Trip Reduction for Convenience Market with Gasoline Pumps (66%) [4]			*-62*	*-62*	*-124*
Pass-By Trip Reduction for Fast-Food Restaurant without Drive-Through (50%) [4]			*-6*	*-6*	*-12*
Pass-By Trip Reduction for Fast-Food Restaurant without Drive-Through (50%) [4]			*-16*	*-18*	*-34*
Diverted Trip Reduction for Convenience Market with Gasoline Pumps (17%) [5]			*-16*	*-16*	*-32*
Net External Trips			**40**	**46**	**86**
Project Site – Net External Trips					
Existing Conditions			26	26	52
Existing Plus Project Conditions			40	46	86
Net New External Trips			**14**	**20**	**34**

Notes:

1. Trip generation estimate calculated using average rate obtained from *Trip Generation Manual, 10th Edition* (Institute of Transportation Engineers, 2017) for Convenience Market with Gasoline Pumps land use (Land Use Code 853).
2. Trip generation estimate calculated using average rate obtained from *Trip Generation Manual, 10th Edition* (Institute of Transportation Engineers, 2017) for Fast-Food Restaurant without Drive-Through land use (Land Use Code 933).
3. Trip internalization estimated using MXD+ mixed-use project trip generation tool.
4. Pass-by trips estimated from *Trip Generation Handbook, 3rd Edition* (Institute of Transportation Engineers, 2017).
5. Diverted trips estimated for similar land uses from *Trip Generation Handbook, 3rd Edition* (Institute of Transportation Engineers, 2017).
6. Trip generation estimate calculated using average rate obtained from *Trip Generation Manual, 10th Edition* (Institute of Transportation Engineers, 2017) for Fast Casual Restaurant land use (Land Use Code 930).
7. Trip generation estimate calculated using average rate obtained from *Trip Generation Manual, 10th Edition* (Institute of Transportation Engineers, 2017) for General Office Building land use (Land Use Code 710).

Source: Fehr & Peers, 2021.



PROJECT DATA

ASSESSOR'S PARCEL NUMBER(S): 068-010-011

ZONING: AUTO CENTER

SITE ADDRESS: 4810 CHILES RD

PROJECT SITE AREA (GROSS):

PARCEL 1	+/-41,300 S.F.	+/-.948 ACRES
PARCEL 1	+/-36,618 S.F.	+/-.84 ACRES
TOTAL	+/-77,918 S.F.	+/-1.788 ACRES

BUILDING DATA:

STRUCTURE	CBC OCCUP.	TYPE OF CONST.	AREA
CONVENIENCE STORE	M	VB	4,069 S.F.
RETAIL	M	VB	4,791 S.F.
CAR WASH	B	IIB	1,586 S.F.
FUELING CANOPY	M	IIB	2,750 S.F.

FLOOR TO AREA RATIO:

TOTAL AREA OF SITE: 77.918 S.F.
TOTAL AREA OF BLDG: (56.4%) 11,048 S.F.

LANDSCAPING DATA:

TOTAL AREA OF LANDSCAPING: XXX S.F.
PERCENTAGE OF SITE LANDSCAPED: XX %

PARKING DATA:

BUILDING AREA	PARKING RATIO	REQ'D.
RETAIL / OFFICE	(1:300/1:400) 4,791 / 300	= 16
CONVENIENCE STORE	(1:400) 4,069 / 400	= 10
CAR WASH	(1:400) 1,586/ 500	= 3
RESTAURANT SUBWAY	1,100 / 15 SEATS	= 5
	TOTAL REQ'D PARKING	= 34

PARKING PROVIDED

REGULAR SPACES		= 30
VAN ACCESSIBLE SPACES		= 2
ELECTRIC VEHICLE CHARGING		= 2
AIR/WATER	= 1	
TOTAL =		34

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Figure 2

Project Site Plan

Trip Distribution and Trip Assignment

New project trips were assigned to the roadway network based on existing traffic patterns and the general distribution of jobs, schools, and housing in the area, as well as permitted driveway movements. The net new external trips are assigned to the roadway network as follows:

Direction	Percentage
Chiles Road to/from the east	25%
Chiles Road to/from the west	29%
Mace Boulevard to/from the north (including to/from I-80)	40%
Mace Boulevard to/from the south	6%

Diverted project trips were assigned based on the mainline freeway volume on I-80. Pass-by trips were assigned based on the volume of traffic on Mace Boulevard and Chiles Road and ease of performing pass-by maneuvers.

Intersection Operations

Table 3 presents the average delay and LOS under Existing Plus Project conditions. Under Existing Plus Project conditions, the project would increase delay at several study intersections but would not worsen LOS (i.e., none of the study intersections would drop an LOS letter grade).

Table 3: PM Peak Hour Intersection Operations – Existing Plus Project Conditions

Intersection	Jurisdiction	Traffic Control[1]	Existing Conditions		Existing Plus Project Conditions	
			Delay[2]	LOS[3]	Delay[2]	LOS[3]
1. Mace Boulevard/Alhambra Drive	City of Davis	Signal	20	B	21	C
2. Mace Boulevard/Second Street/CR 32A	City of Davis	Signal	36	D	31	C
3. Mace Boulevard/I-80 Westbound Ramps	Caltrans	Signal	65	E	57	E
4. Mace Boulevard/Chiles Road	City of Davis	Signal	80	E	79	E
5. Chiles Road/I-80 Eastbound Ramps	Caltrans	Signal	89	F	68	E
6. Mace Boulevard/Cowell Boulevard	City of Davis	Signal	**103**	**F**	**106**	**F**
7. Mace Boulevard/North El Macero Drive	City of Davis	AWSC	**113**	**F**	**110**	**F**

Notes:

Grey text indicates intersections where PM peak hour operations would exceed applicable vehicle delay/LOS thresholds.

1. "Signal" represents an intersection that operates with a traffic signal. "AWSC" represents an intersection with all-way stop control.
2. Delay is reported as seconds per vehicle. Values are rounded to the nearest whole number so the same delay may represent two different LOS conditions if the delay is within 0.5 seconds of the LOS threshold. Average control delay for signalized and all-way stop-controlled intersections is the weighted average for all movements.
3. "LOS" represents level of service, calculated based on methodologies contained in the *Highway Capacity Manual*, *6th Edition* (Transportation Research Board, 2016).

Source: Fehr & Peers, 2022.

At the Mace Boulevard/Cowell Boulevard intersection, the project would increase average intersection delay by three seconds and exacerbate existing LOS F conditions. In instances where a signalized intersection currently operates at LOS F, the City considers a project to have an adverse effect on roadway operations if it would increase delay by five seconds or more. Therefore, this delay increase would not constitute an adverse effect to roadway operations for the purposes of this study.

The Mace Boulevard/North El Macero Drive unsignalized intersection would continue to operate at LOS F under Existing Plus Project conditions. The project would increase traffic volumes at the Mace Boulevard/ North El Macero Drive intersection by three trips, or less than one percent, during the PM peak hour. In such circumstances, the City considers a project to have an adverse effect on roadway operations if the intersection meets the peak hour signal warrant, or if the volume increase resulting from the project would cause the intersection to meet the peak hour signal warrant. The Mace Boulevard/North El Macero Drive intersection does not meet the peak hour signal warrant under either existing or Existing Plus Project conditions. Therefore, this volume increase would not constitute an adverse effect to roadway operations for the purposes of this study.

Note that the results presented in Table 3 indicate that the project would decrease delay at several intersections. This decrease is the result of variation that occurs when averaging the results of multiple microsimulation model runs. Variation in model runs is particularly common when congested conditions are present, as is the case in the roadway network evaluated in this study. From this, it can be concluded that the effect of project trips is less noticeable than variations in results between model runs.

Project Access and On-Site Circulation

This section outlines the access and on-site circulation components of the project. The project-specific recommendations are shown in Figure 3.

Driveway Analysis

It is important that driveways be designed with adequate width, capacity, and throat depth to accommodate exiting traffic, such that blockages to incoming traffic are minimized. Such blockages could cause inbound traffic to spill back onto public streets, which could increase conflicts with other vehicles and modes of travel. The driveway analysis also includes an assessment of inbound vehicle movements to evaluate the extent to which vehicles waiting to enter the project site could affect traffic operations on the adjacent roadway.

Table 4 presents the estimated maximum vehicle queues entering and exiting the two Chiles Road project site driveways under Existing Plus Project conditions. See Appendix A for technical calculations. The following conclusions can be drawn from the driveway analysis:

- Chiles Road West Driveway Egress – This driveway throat depth would provide approximately 10 feet of storage (less than one car length) measured from the back of the sidewalk on the south side of Chiles Road. The project site plan does not indicate that separate outbound left- and right-turn lanes would be provided. Therefore, outbound left- and right-turn vehicles are assumed to form a

single-file queue. This movement would experience a maximum vehicle queue of 25 feet (equivalent to one vehicle), which would exceed the available driveway storage. However, given the configuration of this driveway relative to internal drive aisles and parking stalls, this condition would not block vehicles from entering the project site or otherwise adversely affect internal circulation patterns.

- Chiles Road East Driveway Egress – This driveway throat depth would provide approximately 35 feet of storage. The project site plan does not indicate that separate outbound left- and right-turn lanes would be provided. Therefore, outbound left- and right-turn vehicles are assumed to form a single-file queue. This movement would experience a maximum vehicle queue of 100 feet (equivalent to four vehicles), which would exceed the available driveway storage. This queue could potentially block ingress/egress maneuvers for three parking stalls (labeled as stalls #1, #2, and #3 on the project site plan), but would not otherwise adversely affect internal circulation patterns.
- Westbound Left-Turn Ingress from Chiles Road – Based on the project site plan and the current configuration of Chiles Road, westbound left-turn access from Chiles Road into the project site would occur from the westbound through lane. The American Association of State Highway and Transportation Officials (AASHTO) *Policy on Geometric Design of Highways and Streets* (the *Green Book*) recommends that left-turning traffic should be removed from the through lane whenever practical. The provision of left-turn lanes is reported to reduce crash rates by 20 to 65 percent and improve service levels for intersections and associated turning movements. Table 9-24 of the AASHTO *Green Book* provides left-turn lanes warrants at unsignalized intersections on arterials in urban areas based on left-turn volumes and opposing traffic volumes.

  Based on the project trip generation and trip assignment estimates, the westbound left-turn volumes from Chiles Road into the project site would total an estimated 40 vehicles during the PM peak hour. Opposing eastbound traffic volumes measure at approximately 600 vehicles during the PM peak hour. Table 9-24 of the AASHTO *Green Book* recommends that left-turn lanes be provided at four-legged intersections[1] with a peak hour left-turn volume of 40 vehicles when the opposing traffic volume is 50 vehicles or more. Therefore, the westbound left-turn movements into the Chiles Road driveway would meet the AASHTO *Green Book* criteria for a westbound left-turn lane.
- Northbound Channelized Right-Turn Lane at Mace Boulevard/Chiles Road – Immediately west of the project site, the Mace Boulevard/Chiles Road intersection includes a northbound channelized right-turn lane with a large turning radius at an obtuse angle. This configuration enables vehicles to complete northbound right-turns without the need to substantially reduce travel speeds. As such, vehicles exiting the northbound channelized right-turn lane to proceed eastbound on Chiles Road typically approach the project site at higher rates of speed. Moreover, vehicles exiting the channelized right-turn lane enter Chiles Road in close proximity to the project site, approximately 75 feet from the western project site boundary. Finally, due to the existing roadway geometrics, vehicles utilizing the northbound channelized right-turn lane would not be easily visible for vehicles exiting the project site (i.e., vehicles in the channelized right-turn lane would be over the shoulder

[1] Four the purposes of this analysis, this location is considered a four-legged intersection due to the presence of the Taco Bell driveway on the opposing northerly side of Chiles Road.

and behind drivers of vehicles waiting to exit the project site onto Chiles Road). Altogether, these conditions would limit the reaction time available to drivers of vehicles exiting the project site prior to entering conflict areas with eastbound traffic on Chiles Road. These conflicts would be particularly prevalent for vehicles utilizing the proposed west project site driveway, which would be located approximately 75 feet from the northbound channelized right-turn lane merge area on Chiles Road.

Table 4: PM Peak Hour Maximum Vehicle Queue Lengths – Existing Plus Project Conditions

Driveway		Direction	Movement	Storage (ft.)	Maximum Vehicle Queue[1] (vehicles)
Chiles Road West Driveway	Outbound	NB	Left/Right	10 ft.	**25 ft. (1 vehicle)**
Chiles Road East Driveway	Outbound	NB	Left/Right	35 ft.	**100 ft. (4 vehicles)**

Notes:
Grey text indicates that the maximum queue exceeds the available storage capacity.
1. Maximum queue lengths estimated using methodology described in *Estimation of Maximum Queue Lengths at Unsignalized Intersections* (ITE Journal, November 2001).

Source: Fehr & Peers, 2021.

Fehr & Peers recommends the following (refer to Figure 3):

- Install a raised median on Chiles Road east of Mace Boulevard to reduce conflicts involving vehicles turning left in and out of the Chiles Road west project driveway. This modification would convert the driveway from full access to right-in/right-out only. The median should extend at least 100 feet east on Chiles Road. Install accompanying "No Left Turn" signage and pavement markings for outbound traffic at the Chiles Road west project driveway.
- Install a two-way left-turn lane on Chiles Road to accommodate left-turns in and out of the Chiles Road east project driveway. In order to serve the project site and other adjacent existing Chiles Road uses, the two-way left-turn lane should begin at the back of the striping for the westbound left-turn pocket at the Mace Boulevard/Chiles Road intersection (immediately east of the raised median recommended above) and extend at least to the eastern edge of the South Davis Storage site. Extension of the two-way left-turn lane to the Chiles Road/El Cemonte Avenue intersection would provide a uniform street cross-section and eliminate the need for a midblock transition. This recommendation would require restriping of Chiles Road between Mace Boulevard and El Cemonte Avenue, including the removal of on-street parking on one or both sides of Chiles Road (depending on the desired lane widths and expected users). The resulting Chiles Road cross-section would include the two-way left-turn lane in addition to a vehicle travel lane and a Class II bike lane in each direction. If on-street parking can be preserved on one side of Chiles Road with this cross-section, it is recommended that it be preserved on the north side. Additionally, coordination should occur with relevant transit operators to determine the extent to which this modification would affect transit operations, particularly for Yolobus layover activities.
- Install separate outbound left-turn and right-turn lanes and accompanying signage/pavement markings at the Chiles Road east project driveway to accommodate outbound vehicle queues. The project site plan indicates that this driveway would have a width of approximately 35 feet. Additional width may be required to accommodate a single inbound lane and two outbound lanes depending on the anticipated design vehicle that would utilize this driveway.
- Modify the northbound channelized right-turn lane at Mace Boulevard/Chiles Road to reduce vehicle travel speeds and reduce potential conflicts between vehicles exiting the project site and eastbound traffic on Chiles Road (originating from the northbound channelized right-turn lane). Potential modifications include a) removing and replacing the lane with a standard right-turn lane, b) retrofitting the lane to reduce vehicle speeds and increase yield compliance rates (e.g., reduce turning radius, construct vertical traffic calming element within the turn lane, etc.), c) installing signage and pavement markings, d) relocating the western project site driveway further to the east to increase reaction time between eastbound motorists and motorists turning right out of the project site, or e) a modification of equal effectiveness as determined by the City of Davis Public Works Department.

The recommendations provided above would alter access for the project site as well as for the existing Sinclair gas station immediately west of the project site. The Sinclair gas station currently includes a full access driveway on Chiles Road immediately east of Mace Boulevard. The implementation of the

recommendations above would prevent left-turns in and out of this driveway. Thus, vehicles traveling to the Sinclair gas station from westbound Chiles Road would require an alternate route. One likely route would be use of the project site itself, by entering the Chiles Road east project driveway, circulating through the project site, exiting the Mace Boulevard project driveway, and entering the Sinclair driveway on Mace Boulevard. Given this likely behavior, it may be desirable to modify the project site to provide alternate accommodations for westbound Chiles Road traffic traveling to the Sinclair gas station. One potential solution could be to extend the internal east-west drive aisle into the Sinclair gas station site.

Vehicle Miles Traveled (VMT)

Background

Senate Bill 743

Senate Bill (SB) 743 creates or encourages several statewide changes to the evaluation of transportation and traffic impacts under CEQA. First, it directs the Governor's Office of Planning and Research (OPR) to amend the State CEQA Guidelines to establish new metrics for determining the significance of transportation impacts of projects within transit priority areas (TPAs) and allows OPR to extend use of the new metrics beyond TPAs. In the amended State CEQA Guidelines, OPR selected VMT as the preferred transportation impact metric and applied its discretion to recommend the use of VMT statewide. The California Natural Resources Agency certified and adopted the amended State CEQA Guidelines in December 2018. The amended State CEQA Guidelines state that "generally, VMT is the most appropriate measure of transportation impacts" and required the use of VMT statewide as of July 1, 2020. The amended State CEQA Guidelines further state that land use "projects within 0.5 mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less-than-significant transportation impact."

Second, SB 743 establishes that aesthetic and parking impacts of a residential, mixed-use residential, or employment center projects on an infill site within a TPA shall not be considered significant impacts on the environment.

Third, SB 743 added Section 21099 to the Public Resources Code, which states that automobile delay, as described by level of service (LOS) or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment upon certification of the State CEQA Guidelines by the California Natural Resources Agency. Since the amended State CEQA Guidelines were certified in December 2018, changes in LOS or similar measures of vehicular capacity or traffic congestion are not considered a significant impact on the environment.

Lastly, SB 743 establishes a new CEQA exemption for a residential, mixed-use, and employment center project (a) within a TPA, (b) consistent with a specific plan for which an EIR has been certified, and (c) consistent with an SCS. This exemption requires further review if the project or circumstances changes significantly.

Technical Advisory on Evaluating Transportation Impacts in CEQA

To aid in SB 743 implementation, OPR released a Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory) in December 2018. The Technical Advisory provides advice and recommendations to CEQA lead agencies on how to implement SB 743 changes. This includes technical recommendations regarding the assessment of VMT, thresholds of significance, VMT mitigation measures, and screening thresholds for certain land use projects. Lead agencies may consider and use these recommendations at their discretion.

The Technical Advisory identifies screening thresholds to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study. The Technical Advisory suggests that projects meeting one or more of the following criteria should be expected to have a less-than-significant impact on VMT.

- Small projects—projects consistent with a SCS and local general plan that generate or attract fewer than 110 trips per day.
- Projects near major transit stops—certain projects (residential, retail, office, or a mix of these uses) proposed within 0.5 mile of an existing major transit stop or an existing stop along a high-quality transit corridor.
- Affordable residential development—a project consisting of a high percentage of affordable housing may be a basis to find a less-than-significant impact on VMT.
- Local-serving retail—local-serving retail development tends to shorten trips and reduce VMT. The Technical Advisory encourages lead agencies to decide when a project will likely be local-serving, but generally acknowledges that retail development including stores larger than 50,000 square feet might be considered regional-serving. The Technical Advisory suggests lead agencies analyze whether regional-serving retail would increase or decrease VMT (i.e., not presume a less-than-significant impact).
- Projects in low-VMT areas—residential and office projects that incorporate similar features (i.e., density, mix of uses, transit accessibility) as existing development in areas with low VMT will tend to exhibit similarly low VMT.
- The Technical Advisory also identifies recommended numeric VMT thresholds for residential, office, and retail projects, as described below.
- Residential development that would generate vehicle travel exceeding 15 percent below existing residential VMT per capita may indicate a significant transportation impact. Existing VMT per capita may be measured as a regional VMT per capita or as city VMT per capita.
- Office projects that would generate vehicle travel exceeding 15 percent below existing regional VMT per employee may indicate a significant transportation impact.
- Retail projects that result in a net increase in total VMT may indicate a significant transportation impact.

The Technical Advisory also provides guidance on impacts to transit. Specifically, the Technical Advisory suggests that lead agencies generally should not treat the addition of new transit users as an adverse impact. As an example, the Technical Advisory suggests the following.

> [An] infill development may add riders to transit systems and the additional boarding and alighting may slow transit vehicles, but it also adds destinations, improving proximity and accessibility. Such development also improves regional vehicle flow by adding less vehicle travel onto the regional network. (Governor's Office of Planning and Research, 2018).

VMT Screening Assessment

The project would be an infill project that would entail the redevelopment of existing gas station and retail commercial uses on the project site. The project would result in a net decrease of gas station fueling positions by 2 gas fueling positions and 2 truck fueling positions. Additionally, the project would result in a net increase in commercial space by 3,600 square feet and the addition of a car wash. The project commercial uses would be predominantly retail in nature.

In accordance with the OPR Technical Advisory, the project would satisfy the local-serving retail VMT screening criteria by virtue of the nature and size of the project (predominantly retail development less than 50,000 square feet in size). Therefore, the project is assumed to have a less than significant impact on VMT since it satisfies one or more of the VMT screening criteria identified in the OPR Technical Advisory. No quantitative VMT analysis or associated mitigation measures are required.

Summary & Conclusions

In summary, review of the project revealed the need for the following modifications to the surrounding roadway network:

- Install a raised median on Chiles Road east of Mace Boulevard.
- Install a two-way left-turn lane on Chiles Road east of Mace Boulevard.
- Install separate outbound left-turn and right-turn lanes and accompanying signage/pavement markings at the Chiles Road east project driveway.
- Modify the northbound channelized right-turn lane at the Mace Boulevard/Chiles Road intersection to reduce vehicle travel speeds.

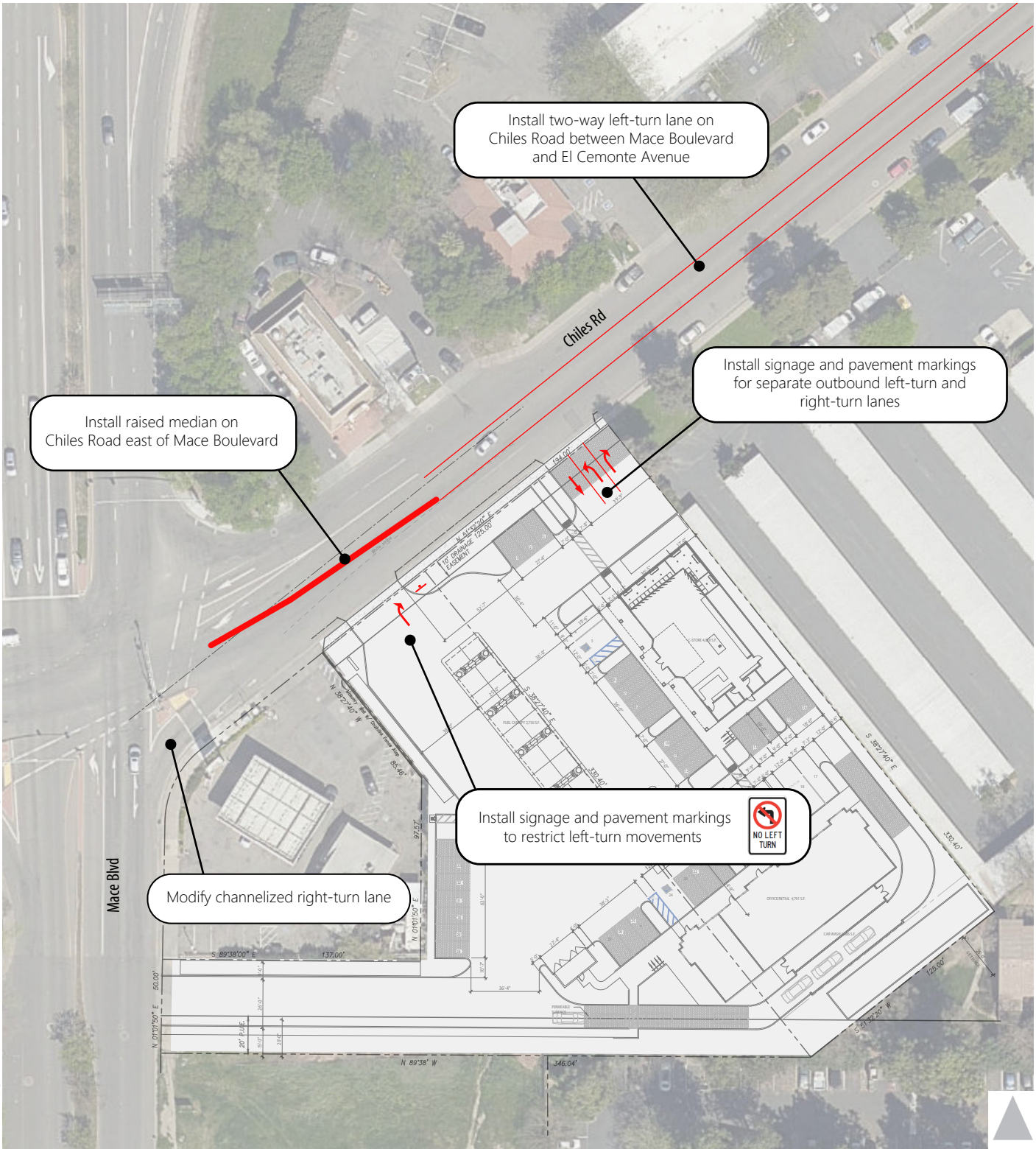

Figure 3

Recommended Site Access Improvements

References

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

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

ITE Journal (2001). *Estimation of Maximum Queue Lengths at Unsignalized Intersections.*

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

Appendix A. Technical Appendix

SimTraffic Post-Processor **4810 Chiles Road**
Average Results from 10 Runs **Existing Plus Project**
Volume and Delay by Movement **PM Peak Hour**

Intersection 1 **Mace Blvd/Alhambra Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	253	249	98.5%	46.3	11.6	D
	Through	611	595	97.4%	16.0	2.9	B
	Right Turn						
	Subtotal	864	844	97.7%	24.7	5.3	C
SB	Left Turn						
	Through	653	675	103.4%	22.7	3.6	C
	Right Turn	23	23	98.3%	8.6	2.0	A
	Subtotal	676	698	103.2%	22.1	3.5	C
EB	Left Turn	12	10	84.2%	40.9	26.1	D
	Through						
	Right Turn	199	196	98.4%	2.3	0.2	A
	Subtotal	211	206	97.6%	4.0	1.1	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		1,751	1,748	99.8%	21.2	3.0	C

Intersection 2 **Mace Blvd/ 2nd Ave-Co Rd 32A** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	367	363	98.8%	27.0	3.3	C
	Through	719	701	97.5%	18.7	3.6	B
	Right Turn	32	31	95.6%	16.1	5.0	B
	Subtotal	1,118	1,094	97.9%	21.2	3.1	C
SB	Left Turn	98	102	104.4%	46.0	10.9	D
	Through	662	658	99.4%	42.2	11.2	D
	Right Turn	93	99	106.7%	9.4	2.3	A
	Subtotal	853	860	100.8%	39.1	9.3	D
EB	Left Turn	124	118	95.1%	35.5	4.5	D
	Through	113	110	97.3%	32.3	8.7	C
	Right Turn	633	633	99.9%	38.2	54.0	D
	Subtotal	870	860	98.9%	35.3	35.9	D
WB	Left Turn	19	18	94.7%	46.1	23.2	D
	Through	22	23	103.6%	31.8	12.6	C
	Right Turn	41	45	109.3%	13.1	6.1	B
	Subtotal	82	86	104.4%	25.3	8.2	C
Total		2,923	2,900	99.2%	30.6	12.9	C

Intersection 4 **Mace Blvd/I-80 WB Ramps** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	254	225	88.7%	34.5	6.5	C
	Through	449	419	93.4%	7.8	2.4	A
	Right Turn						
	Subtotal	703	644	91.7%	17.5	3.2	B
SB	Left Turn						
	Through	1,095	1,060	96.8%	118.3	83.2	F
	Right Turn	219	218	99.5%	67.8	58.7	E
	Subtotal	1,314	1,278	97.2%	110.3	79.1	F
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	390	393	100.7%	31.3	6.2	C
	Through						
	Right Turn	669	669	99.9%	4.2	0.7	A
	Subtotal	1,059	1,061	100.2%	14.2	2.6	B
Total		3,076	2,983	97.0%	56.5	34.3	E

Intersection 5 **Mace Blvd/Chiles Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	24	23	97.5%	129.5	26.2	F
	Through	516	438	84.9%	153.0	32.6	F
	Right Turn	161	136	84.3%	138.3	35.7	F
	Subtotal	701	597	85.2%	148.8	32.6	F
SB	Left Turn	270	261	96.7%	94.9	19.1	F
	Through	427	423	99.1%	43.0	9.5	D
	Right Turn	287	277	96.5%	29.6	11.8	C
	Subtotal	984	961	97.7%	54.1	8.5	D
EB	Left Turn	337	305	90.5%	143.1	29.0	F
	Through	280	272	97.2%	26.9	4.3	C
	Right Turn	85	79	92.9%	1.9	0.4	A
	Subtotal	702	656	93.5%	79.8	16.6	E
WB	Left Turn	50	48	95.4%	42.7	33.8	D
	Through	63	64	101.1%	37.9	29.0	D
	Right Turn	273	271	99.2%	46.8	42.1	D
	Subtotal	386	382	99.0%	44.8	38.6	D
Total		2,773	2,597	93.6%	78.7	10.6	E

Intersection 15 **Chiles Blvd/I-80 EB Ramps** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	177	178	100.6%	32.0	17.3	C
	Through						
	Right Turn	29	30	103.1%	3.6	1.0	A
	Subtotal	206	208	101.0%	28.1	14.8	C
EB	Left Turn						
	Through	525	489	93.2%	131.0	80.0	F
	Right Turn						
	Subtotal	525	489	93.2%	131.0	80.0	F
WB	Left Turn						
	Through	374	365	97.5%	9.4	2.6	A
	Right Turn						
	Subtotal	374	365	97.5%	9.4	2.6	A
Total		1,105	1,062	96.1%	67.8	38.6	E

Intersection 6 **Mace Blvd/Cowell Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	15	13	86.7%	330.2	139.3	F
	Through	360	277	77.0%	396.8	192.2	F
	Right Turn	27	21	78.9%	393.8	220.8	F
	Subtotal	402	312	77.5%	391.0	187.7	F
SB	Left Turn	142	140	98.9%	44.6	7.7	D
	Through	226	221	97.6%	20.5	4.9	C
	Right Turn	67	69	102.7%	7.5	1.7	A
	Subtotal	435	430	98.8%	26.4	4.4	C
EB	Left Turn	119	115	96.8%	96.9	55.0	F
	Through	102	106	103.8%	45.8	41.5	D
	Right Turn	24	25	105.8%	40.7	45.7	D
	Subtotal	245	247	100.6%	67.4	46.2	E
WB	Left Turn	21	18	87.1%	58.1	24.5	E
	Through	47	47	99.4%	76.6	41.5	E
	Right Turn	98	97	98.5%	71.0	31.5	E
	Subtotal	166	162	97.3%	71.1	29.9	E
Total		1,248	1,149	92.1%	105.6	19.1	F

SimTraffic Post-Processor **4810 Chiles Road**
Average Results from 10 Runs **Existing Plus Project**
Volume and Delay by Movement **PM Peak Hour**

Intersection 7 **Mace Blvd/El Macero** **All-way Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	14	13	95.7%	299.4	260.8	F
	Through	331	271	81.8%	366.3	198.8	F
	Right Turn	9	7	73.3%	332.9	234.9	F
	Subtotal	354	291	82.1%	359.2	195.3	F
SB	Left Turn	99	93	94.1%	8.9	1.2	A
	Through	163	161	98.6%	11.1	1.1	B
	Right Turn	9	8	91.1%	7.2	3.8	A
	Subtotal	271	262	96.7%	10.3	1.0	B
EB	Left Turn	4	3	72.5%	30.3	44.3	D
	Through	7	7	94.3%	19.8	38.4	C
	Right Turn	10	12	116.0%	7.4	8.3	A
	Subtotal	21	21	100.5%	15.8	18.1	C
WB	Left Turn	7	5	74.3%	91.8	117.4	F
	Through	14	15	106.4%	73.3	99.0	F
	Right Turn	67	65	96.3%	121.9	95.5	F
	Subtotal	88	85	96.1%	118.2	93.6	F
Total		734	658	89.7%	110.3	29.9	F

Maximum Queue Estimation for:
Minor Street Left/Through/Right-Turn

Movement: Outbound East Driveway Left/Right to Chiles Road

Input Data

Subject Approach	
Total Approach Volume (vph) =	103
PHF=	0.94
%RT's =	0.45
Is a Traffic Signal Located on Major Street Within 1/4 mi of intersection? (Enter 1 if yes; 0 if no)	1

Major Street	
Conflicting Traffic Volume for Left/Through Movements (vph) =	943
PHF=	0.94
Conflicting Traffic Volume for Right-Turn Movements (vph) =	576
PHF=	0.94

Output

Estimated Maximum Queue	4	vehicles

Maximum Queue Estimation for:
Minor Street Left/Through/Right-Turn

Movement: Outbound West Driveway Left/Right to Chiles Road

Input Data

Subject Approach	
Total Approach Volume (vph) =	37
PHF=	0.94
%RT's =	0.5
Is a Traffic Signal Located on Major Street Within 1/4 mi of intersection? (Enter 1 if yes; 0 if no)	1

Major Street	
Conflicting Traffic Volume for Left/Through Movements (vph) =	959
PHF=	0.94
Conflicting Traffic Volume for Right-Turn Movements (vph) =	597
PHF=	0.94

Output

Estimated Maximum Queue	1	vehicles

YOCHA DEHE
CULTURAL RESOURCES

October 11, 2021

City of Davis
Attn: Ike Njoku, Planner & Historical Resources Manager
23 Russell Boulevard
Suite #2
Davis, CA 95616

RE: 4810 Chiles Rd Davis Project YD-10072021-03

Dear Ike Njoku:

Thank you for your project notification dated, October 7, 2021, regarding cultural information on or near the proposed 4810 Chiles Rd Davis Project. We appreciate your effort to contact us and wish to respond.

The Cultural Resources Department has reviewed the project and concluded that it is within the aboriginal territories of the Yocha Dehe Wintun Nation. Therefore, we have a cultural interest and authority in the proposed project area.

Based on the information provided, Yocha Dehe Wintun Nation is not aware of any known cultural resources near this project site and a cultural monitor is not needed. However, we recommend cultural sensitivity training for any pre-project personnel to be added to the permit as a condition of approval.

To schedule cultural sensitivity training, prior to the start of the project, please contact:

CRD Administrative Staff
Yocha Dehe Wintun Nation
Office: (530) 796-3400
Email: THPO@yochadehe-nsn.gov

Please refer to identification number YD – 10072021-03 in correspondence concerning this project.

Thank you for providing us the opportunity to comment.

Sincerely,

DocuSigned by:
5ED632FDB9C34EA...
Tribal Historic Preservation Officer