

ATTACHMENT J1

**INITIAL STUDY/ADDENDUM TO
THE ENVIRONMENTAL IMPACT
REPORT ENVISION STOCKTON
2040 GENERAL PLAN UPDATE
May 2021**

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TO THE
ENVIRONMENTAL IMPACT REPORT
ENVISION STOCKTON 2040 GENERAL PLAN UPDATE**

State Clearinghouse No.: 2017052062
Certified by the City of Stockton, California
December 2018

**HAMMER LANE ANNEXATION AND
DEVELOPMENT PROJECT**

May 2021

Prepared for:
CITY OF STOCKTON
COMMUNITY DEVELOPMENT DEPARTMENT
345 N. El Dorado Street
Stockton, CA 95202

Prepared by:
BASECAMP ENVIRONMENTAL, INC.
115 South School Street, Suite 14
Lodi, CA 95240



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CULTURAL RESOURCE STUDIES ARE CONTAINED IN A CONFIDENTIAL APPENDIX THAT IS AVAILABLE TO QUALIFIED REVIEWERS AT THE STOCKTON PERMIT CENTER, 345 N EL DORADO STREET, STOCKTON

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1.0 INTRODUCTION

1.1 PURPOSE OF THE INITIAL STUDY/ADDENDUM

The California Environmental Quality Act (CEQA) requires State and local agencies to consider and document the potential environmental impacts of proposed projects as well as mitigation measures needed to reduce those impacts to a less than significant level. This is ordinarily accomplished in Initial Studies, EIRs and Negative Declarations. CEQA encourages the use of previously prepared and programmatic environmental documents in evaluating subsequent projects when they effectively address the environmental issues associated with the project.

The proposed project is the Hammer Lane Annexation and Development Project. The project involves the annexation of approximately eight acres of land and road rights-of-way into the City of Stockton. The annexation area is proposed for development as a retail commercial center and a hotel. The project is described in more detail in Chapter 2.0.

Based on the analysis provided in Chapter 3.0 of this document, the City of Stockton has determined that the potential environmental effects of the project have already been effectively addressed in the City's Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements EIR, hereinafter referred as the GPEIR. The GPEIR was certified by the Stockton City Council in December 2018. This Initial Study/Addendum provides substantial evidence supporting the City's determination.

The GPEIR is hereby incorporated by reference into this document. A copy of the certified GPEIR may be reviewed at the Stockton Community Development Department office at 345 N. El Dorado Street in Stockton.

This Initial Study/Addendum considers the potential environmental effects of the project and whether any revisions to the GPEIR are needed to provide an adequate environmental review document for the proposed project, consistent with the requirements of CEQA. The remainder of this chapter describes the criteria for reaching this conclusion and the project background. Chapter 2.0 describes the proposed project and compares it to the future land development activities for the site and vicinity foreseen in the land use designations of the Envision Stockton 2040 General Plan and the certified GPEIR. Chapter 3.0 – the Initial Study – analyzes the degree to which the proposed project would change the future land use scenario described in the General Plan on the environmental effects described in the GPEIR. The conclusions of this analysis are discussed in Chapter 4.0.

1.2 CEQA PROVISIONS RELATED TO THE INITIAL STUDY/ADDENDUM

Ordinarily, the certification of an EIR and filing of a Notice of Determination closes the CEQA review process for a project. However, when a lead agency considers a later project that may be covered by a certified Program EIR but might require revisions to the Program EIR, CEQA describes how the Program EIR may be used in the review of the later project (CEQA Guidelines Section 15168) and provides options for use of the Program EIR that can reduce the need for new documentation and streamline the subsequent environmental review process.

Section 15168 provides that a Program EIR may be used in the environmental review of a later project, subject to a review of whether the later project might involve environmental effects that were not addressed in the Program EIR. This review involves consideration of whether the later project is within the scope of the Program EIR, including consideration of the consistency of the later project with the allowable land use, development intensity, geographic area and infrastructure covered in the Program EIR.

Options for CEQA documentation for a project addressed by a previous EIR are defined in Sections 15162 through 15164 of the CEQA Guidelines. These options include preparation of a subsequent EIR, a supplemental EIR, or an addendum. CEQA Guidelines Section 15162 describes the conditions under which preparation of a subsequent EIR may be warranted, while CEQA Guidelines Section 15163 describes the same for a supplemental EIR. If neither of those conditions apply, then an addendum can be prepared. The applicability of these options to the use of the GPEIR in documenting the potential environmental effects of the proposed project is evaluated in detail in Chapter 3.0 of this document.

CEQA Guidelines Section 15162(a) states that once an EIR has been certified for a project, no subsequent CEQA documentation shall be prepared for that project unless the lead agency determines one or more of the following:

- (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.
- (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.
- (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:

- (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
- (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
- (C) Mitigation measures or alternatives previously found to be not feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
- (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative.

CEQA Guidelines Section 15164 provides that an addendum may be used to make "minor technical changes or additions" that are necessary to assure that the previous EIR is "adequate under CEQA," provided that no new important "issues about the significant effects on the environment" are raised. The provisions of Section 15164 are outlined below.

- (a) The lead agency or responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.
- (b) (Refers only to Negative Declarations)
- (c) An addendum need not be circulated for public review but can be included in or attached to the final EIR or adopted negative declaration.
- (d) The decision-making body shall consider the addendum with the final EIR or adopted negative declaration prior to making a decision on the project.
- (e) A brief explanation of the decision not to prepare a subsequent EIR pursuant to Section 15162 should be included in an addendum to an EIR, the lead agency's required findings on the project, or elsewhere in the record. The explanation must be supported by substantial evidence.

1.3 ENVISION STOCKTON 2040 GENERAL PLAN AND THE GPEIR

The Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements were adopted by the Stockton City Council in December 2018 after certifying the GPEIR. The General Plan serves as the principal policy document guiding future conservation and development in the City of Stockton, and within the Planning Area. Outside the City, to the year 2040. The General Plan includes goals, policies, and actions that have been

designed to implement the community's vision for future Stockton. The policies and actions are intended to be actively used by the City to guide day-to-day decision-making so there would be continuing progress toward attainment of the proposed goals. The Stockton Utility Master Plan Supplements identify needed infrastructure improvements to serve development anticipated under the General Plan in its 2040 horizon year.

The General Plan addresses all aspects of development, including land use, transportation, housing, economic development, public facilities and infrastructure, and open spaces, among other topics. The General Plan includes an introductory chapter, a chapter describing the planning framework, four separate chapters that establish goals and policies for each given set of topics, and an Action Plan that outlines specific measures, procedures, programs, or techniques that will implement the policies. The four primary topic chapters are as follows:

- *Land Use.* This chapter designates all lands within the Planning Area for specific uses such as housing, commercial, industrial, or agricultural uses. The Land Use Chapter also provides overall development criteria for each land use designation and overall land use policies that apply to development throughout the City, including the connection between land use, transportation, and utilities infrastructure. This chapter also incorporates the State-required Open Space and Conservation Element topics, as well as other topics important to the community, including economic development and community design.
- *Transportation.* This chapter specifies the general location and extent of existing and proposed major streets and other transportation facilities. This chapter is correlated with the Land Use chapter to provide adequate pedestrian, bicycle, motor vehicle, transit, air, and water transportation to serve both new and existing land uses as development of the City proceeds.
- *Safety.* This chapter provides information about risks in Stockton due to natural and human-made hazards and contains goals, policies, and actions designed to protect the community, community members and property from hazards. It specifically addresses risks associated with geologic and seismic hazards, flooding and storm drainage, wildland fires, and hazardous materials and waste. This chapter also includes policies and actions to deter crime and support law enforcement and community protection efforts.
- *Community Health.* The Community Health Chapter addresses the State-required Environmental Justice and Noise Element topics, as well as Air Quality, which is a required regional general plan topic per the San Joaquin Valley Air Pollution Control District. This chapter also addresses public services and utilities, as well as the community-identified priorities of public health, recreation, youth and education, the local economy, and climate change and adaptation.

A key component of the General Plan is the General Plan Land Use Map. The map identifies the land use designations governing future development of all parcels within the Planning Area. There are twelve land use designations covering various types of development: residential, commercial, industrial, and open space, among others. The

project site and surrounding lands south of Hammer Lane are designated for Commercial development.

Pursuant to CEQA Section 21080(d) and CEQA Guidelines Section 15063, the City determined that the proposed General Plan could result in substantial amounts of new development, and potentially significant environmental impacts, and that an EIR would be required under CEQA. The Draft GPEIR was prepared and released for public review in June 2018. The Draft GPEIR evaluated the potential environmental impacts of implementation of the General Plan on a programmatic level. As described in CEQA Guidelines Section 15168, program EIRs are appropriate when a project consists of a series of actions related to the issuance of rules, regulations, and other planning criteria. Public review was completed within a 45-day review period, and a Final EIR was prepared and ultimately certified by the City Council in December 2018.

The GPEIR considered the potential environmental effects of projected new development through 2040, based on land uses designated in the General Plan Land Use Map. The future land uses considered in the GPEIR include development of the project site with commercial land uses. The GPEIR considered the range of environmental concerns ordinarily addressed in EIRs, including effects of new development on agricultural land conversion, air quality, biological and cultural resources, greenhouse gas emissions, land use, noise, and transportation, among others. The GPEIR found that the General Plan would involve significant and unavoidable impacts in several issue areas including:

Farmland Conversion

Long-Term Operational Pollutant Emissions, Consistency with Air Quality Management Plans, Violations of Ambient Air Quality Standards

Construction Pollutant Emissions

Greenhouse Gas Emissions

Increases in Traffic Noise

Substantial Employment Growth

Traffic Level of Service Impacts to Local Roads, Regional Roads and Freeway Segments

The degree to which the GPEIR adequately addresses these environmental issues and concerns is the specific subject of Chapter 3.0 of this document.

1.4 PROJECT BACKGROUND

The proposed project involves development of several commercial uses adjacent to the northeastern portion of Stockton (Figures 1-1 through 1-5). Proposed uses include several retail commercial uses and a hotel on primarily vacant land that until recently supported a small orchard, single-family residences, a church and a private school. Proposed development is consistent with the existing Commercial designation of the site.

The project is in the planned trajectory of commercial development along Hammer Lane. The northeastern portion of the City of Stockton has developed progressively from the vicinity of the Union Pacific Railroad east towards State Route (SR) 99 from the 1980s through the present. Major urban development projects approved during the 1980s and 1990s, and subsequent infill, resulted in today's largely urban landscape in the area. Development projects included the Stockton Auto Center, Morada Lane, Blossom Ranch, Morada Ranch, and the Christian Life Center, the latter including the church grounds and an adjacent single-family residential subdivision. Recently, the San Joaquin Local Agency Formation Commission (LAFCo) approved the annexation of an area immediately west of the proposed project site to the City of Stockton, on which the City approved development of a CarMax automobile dealership.

The proposed project site, particularly the area adjacent to Maranatha Drive, has been the subject of development proposals in recent years. During the period 2003-2008, the City considered the Origone Ranch Specific Plan, which included the proposed project site and surrounding areas. The proposed Specific Plan covered approximately 390 acres of undeveloped land south of Hammer Lane between Holman Road and SR 99, and it proposed commercial development of lands along Hammer Lane and Maranatha Drive, including the project site. The processing of the Specific Plan applications was halted during the 2008-2010 economic recession, and the applications were subsequently withdrawn.

Later, Hammer Petroleum, LLC and SCG Properties applied for an amendment to the San Joaquin County General Plan and a zone reclassification for an approximately 14.9-acre area that included the western portion of the proposed project site and the approved CarMax annexation. The County granted approval for these actions in 2016, but the approvals were challenged in court and ultimately overturned.

In 2018, Hammer Petroleum, LLC and SCG Properties re-applied to the County for a General Plan Amendment, rezoning, and Tentative Parcel Map for the development of retail commercial uses on the approximately 4.32-acre parcel at the southeastern corner of Hammer Lane and Maranatha Drive, the current proposed commercial center site. The County determined that this proposal would require preparation of an EIR. While the applications were being processed and the EIR was in preparation, two parcels adjacent to and east of the project site were sold. The new owner proposes constructing a hotel on these parcels. Based on City of Stockton interest in annexing both sites, the County applications were withdrawn, and applications for annexation, pre-zoning and development of the proposed retail commercial and hotel sites were submitted to the City. Both projects are undergoing concurrent review by the City. The two projects together constitute the proposed project described in Chapter 2.0 of this Addendum.

1.5 SUMMARY OF CONCLUSIONS OF THE INITIAL STUDY/ADDENDUM

The revisions to the GPEIR needed to describe the proposed project and its environmental impacts documented in this Initial Study/Addendum consist entirely of

minor changes and updates to the Project Description and to the environmental impact analysis. In most cases, these changes are needed to address the project specific environmental effects at the project level.

As discussed in Chapters 2.0 and 3.0, the changes associated with the proposed project do not meet any of the criteria of CEQA Guidelines Sections 15162 and 15163 for preparation of a Subsequent or Supplemental EIR. The changes would not result in any significant effects that were not discussed in the certified GPEIR, and their implementation would not make any of the significant effects identified in the GPEIR substantially more severe. The Initial Study/Addendum concludes that there are no additional feasible mitigation measures that would reduce the significant and unavoidable impacts of General Plan implementation to a level that is less than significant. Other effects identified as potentially significant in the GPEIR can be reduced to a level that would be less than significant with application of mitigation measures described in the certified GPEIR. The project would require one mitigation measure not specifically addressed in the GPEIRs archaeological monitoring of construction excavation and grading. As discussed in Chapter 4.0, this is an acceptable change in the context of an Addendum, as provided in CEQA Guidelines Section 15164. No additional mitigation measures with the above exception are required are required to address the potential environmental effects of the project.

As required by CEQA, the City adopted a Mitigation Monitoring and Reporting Program (MMRP) prior to certifying the GPEIR and approving the General Plan. The MMRP describes the mitigation measures that are to be implemented throughout implementation of the General Plan. Since no new or substantially more severe environmental effects, or new or more effective mitigation measures, have been identified in this Initial Study/Addendum, the adopted MMRP is largely applicable to the project. Appendix A contains the GPEIR MMRP.

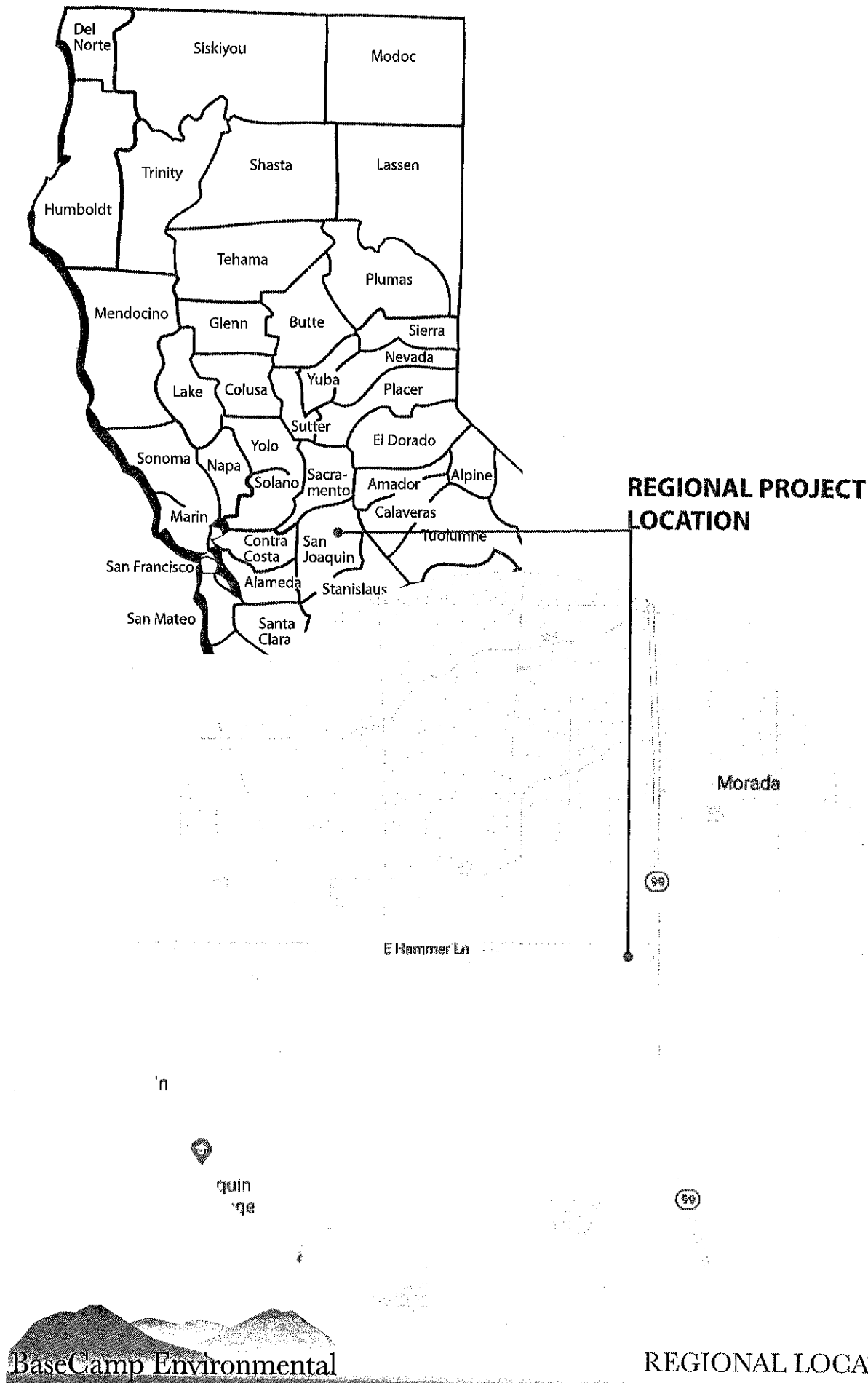
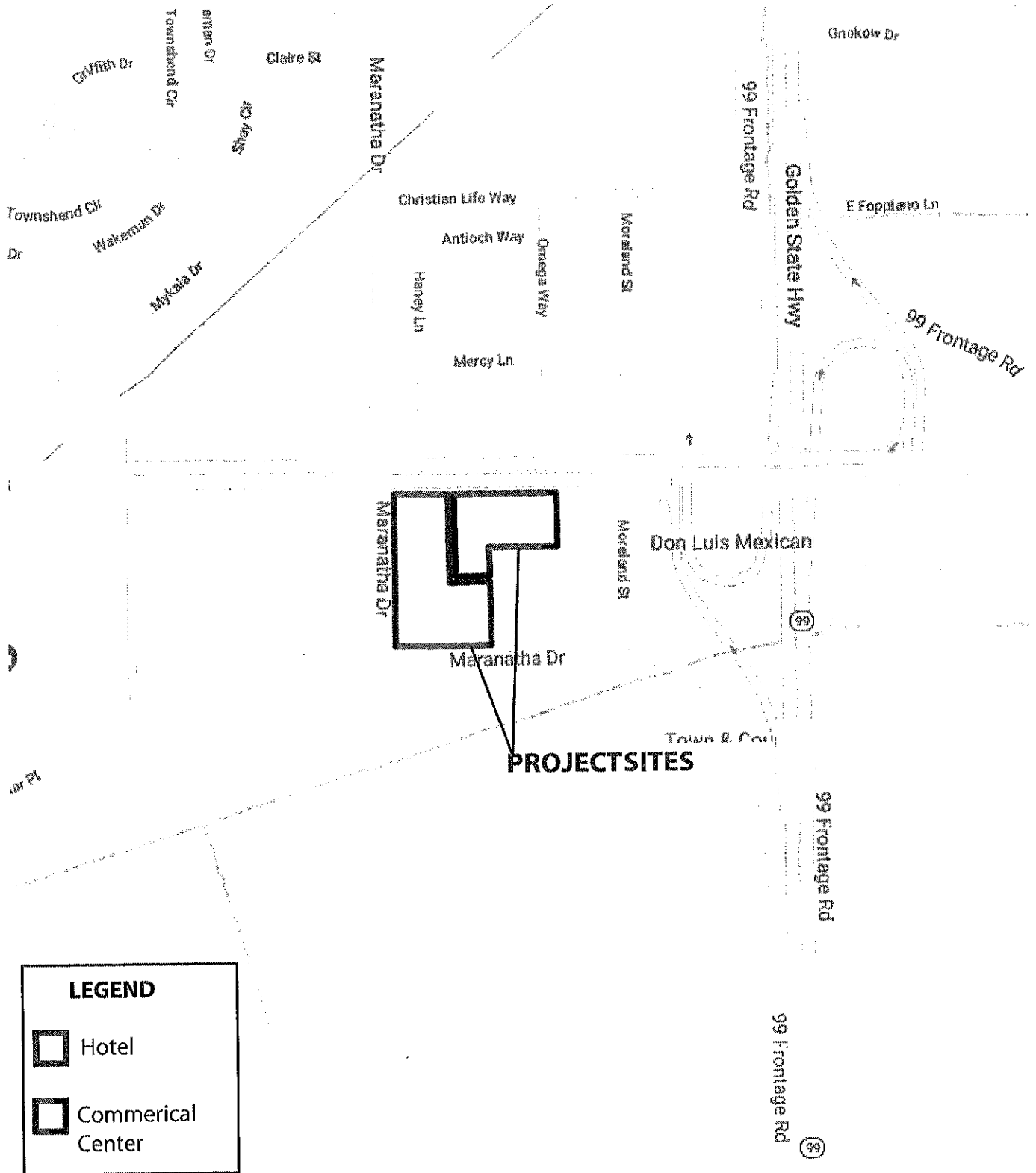
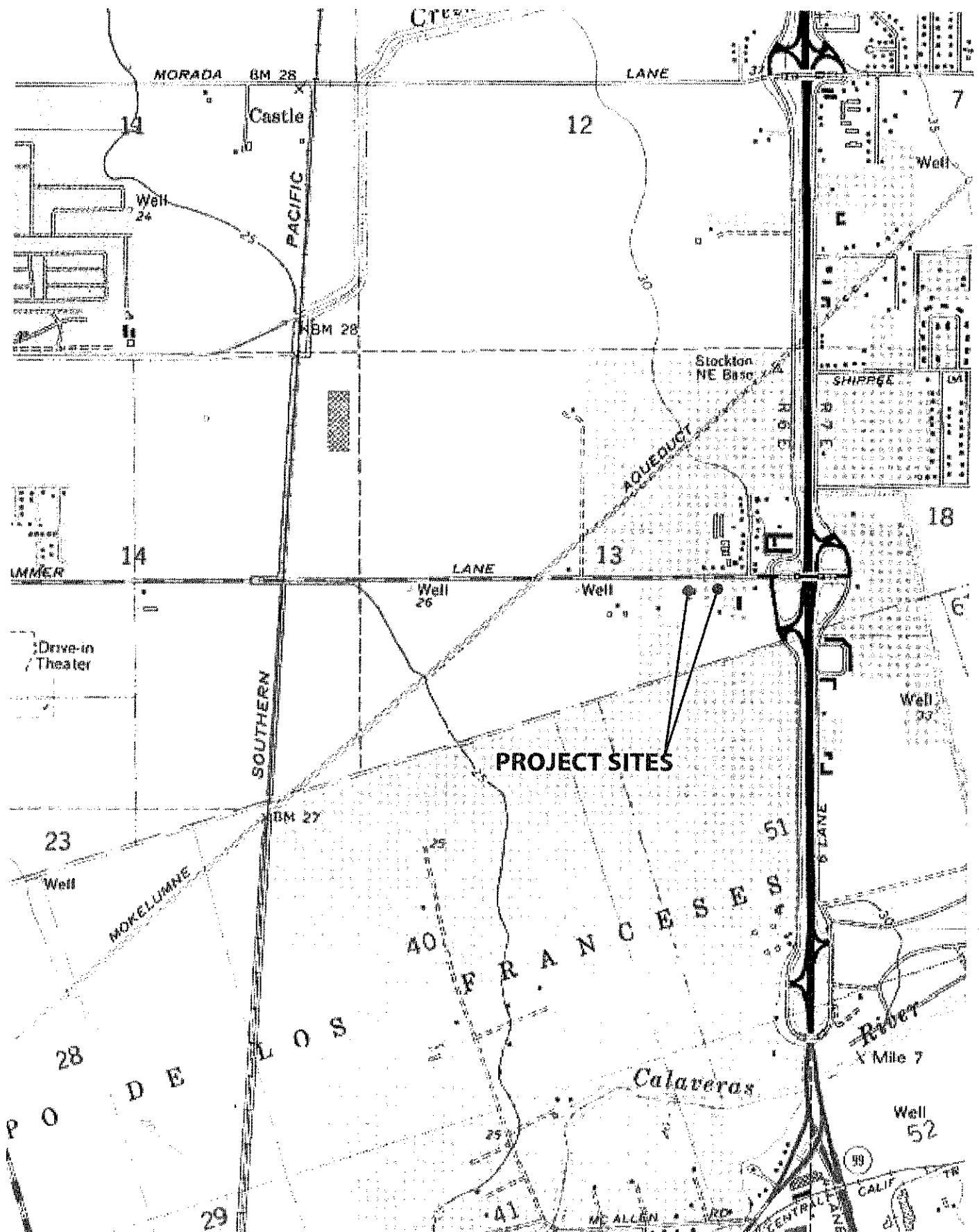


Figure 1-1
REGIONAL LOCATION MAP





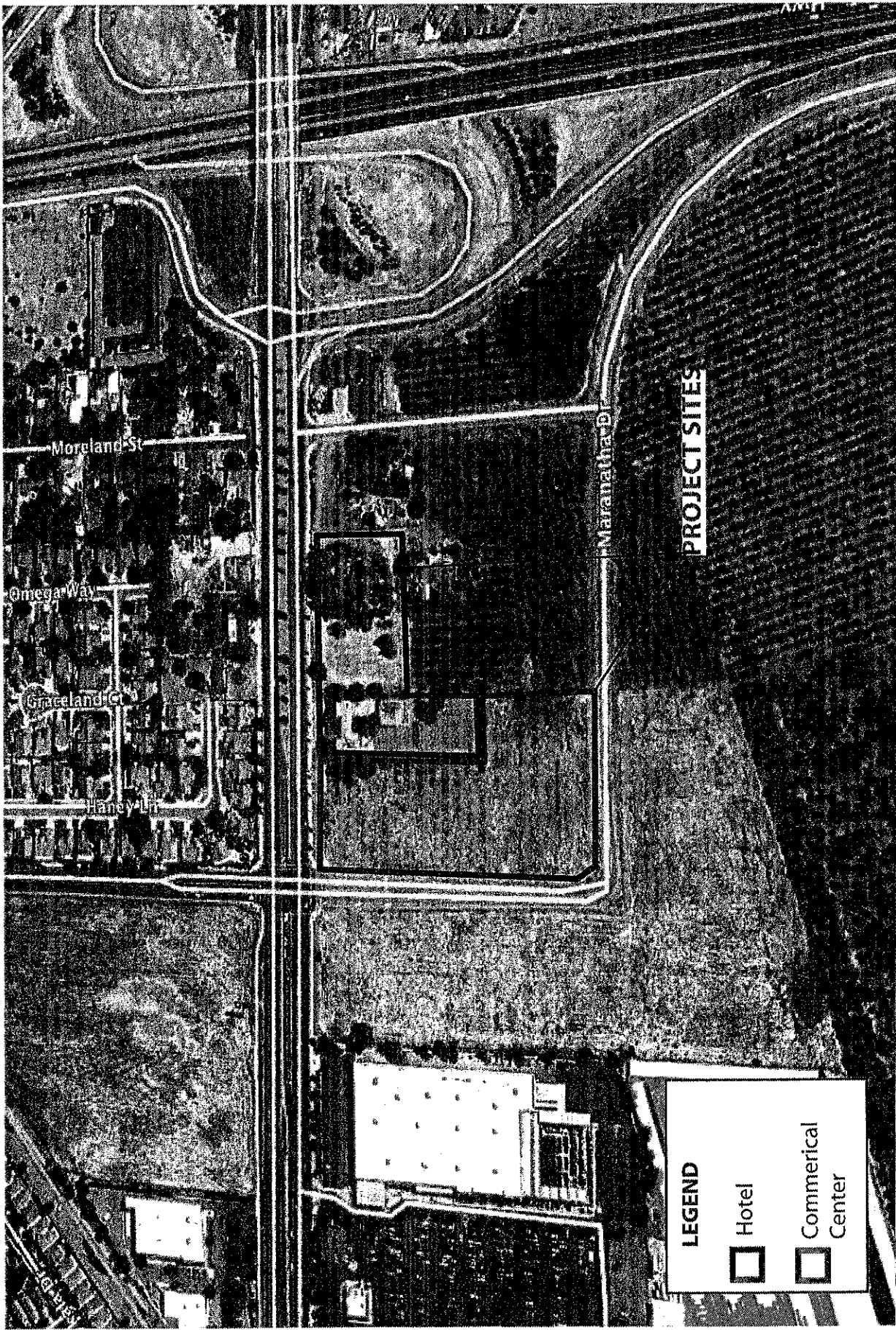


Figure 1-4
AERIAL PHOTO



2.0 PROJECT DESCRIPTION AND PROJECT-RELATED CHANGES TO THE 2040 GPEIR

2.1 PROPOSED PROJECT DESCRIPTION

Annexation and Pre-zoning

The project proposes to annex approximately eight acres, currently located in unincorporated San Joaquin County, to the City of Stockton. The annexation area includes three parcels of land identified as Assessor Parcel Number (APN) 130-030-06, - 07, and - 13, along with a portion of the right-of-way of Hammer Lane. Upon City approval, the City would submit an application to the San Joaquin LAFCo for approval of the annexation. As part of the annexation process, the site would be pre-zoned to Commercial-General (CG) to allow for the proposed commercial development (Figure 2- 4A). Since the site is already designated Commercial by the Stockton 2040 General Plan, no amendment to the General Plan would be required. Proposed annexation and pre- zoning diagrams are shown on Figures 2-1 and 2-2. Annexation and pre-zoning actions are within the range of probable development-related activities considered in the GPEIR.

Tentative Parcel Map

The application to the City for approval of the retail commercial development includes a Tentative Parcel Map (Figure 2-3). The Tentative Parcel Map would subdivide APN 130-030-13 into four parcels, one for each of the proposed commercial developments on the project site. Land division for this purpose are within the range of probable development-related activities considered in the GPEIR.

Parcel 1	1.01 ac.	AMPM Convenience Store and Fueling Station
Parcel 2	0.89 ac.	Sonic Quick-Serve Restaurant
Parcel 3	1.32 ac.	Black Bear Diner Restaurant
Parcel 4	1.10 ac.	Elite Car Wash

Project Development

Figure 2-4 shows the overall proposed development of the proposed retail commercial uses. APN 130-030-13, a vacant parcel of approximately 4.32 acres, is proposed to be developed as a retail commercial center with the four commercial uses listed above for the Tentative Parcel Map. The proposed uses within the commercial center are described below. Additional detail is provided in the applicant's Project Description (Appendix F). Rooftop mechanical units and equipment for each of the proposed buildings will be screened by parapet walls.

- ARCO AM/PM fueling station and convenience store (elevations in Figure 2-5A&B). The fueling station component would have eight multi-pump dispensers

that would serve up to 16 vehicles at a time. A canopy approximately 6,41 square feet in area would cover the dispensing pumps. The convenience store would be in a single-story wood or metal stud frame structure approximately 3,922 square feet in floor area. The convenience store would be licensed for Type 20 – Beer and Wine sales. The proposed store would not be within 500 feet of schools, day-care, public park, playground, recreation or youth facilities.

- A Sonic quick-serve restaurant (elevations in Figure 2-5C). The Sonic building would be a single-story wood or metal stud frame structure have approximately 2,720 square feet of floor area for cooking and indoor dining. Customers would receive in-vehicle food service in two designated parking areas covered by canopies totaling 2,640 square feet in area.
- A Black Bear Diner sit-down restaurant (elevations in Figure 2-5D). The Black Bear Diner building would be a single-story wood or metal stud frame structure have 5,338 square feet of floor area and 157 seats for indoor dining. The Black Bear project would be licensed for Type 20 – Beer and Wine sales. The proposed store would not be within 500 feet of schools, day-care, public park, playground, recreation or youth facilities.
- An Elite Car Wash, a stand-alone, unattended carwash (elevations in Figure 2- 5E). The carwash would be a single-story wood or metal stud frame “tunnel” carwash, with a conveyor approximately 140 feet in length and within a structure of approximately 4,625 square feet. The carwash also would provide 20 vacuum stations to the north and east of the main facility.

The retail commercial center would provide a total of 170 parking spaces located throughout the site, distributed as shown below.

Standard Spaces (9' x 19')	86 spaces
Accessible Spaces (9' x 19')	6 spaces
Fuel Island	16 spaces
Clean Air/ Carpool/ EV	15 spaces
Sonic's Canopy Parking	16 spaces
Car Wash Vacuum Spaces	20 spaces
Car Wash Vacuum Space (Accessible)	1 space.
Future EV Charging (Accessible)	4 spaces
Future EV Charging	6 spaces

Access to the proposed commercial center would be provided from an entry-only driveway off Hammer Lane shared with the proposed hotel, two driveways off Maranatha Drive along the west side of the site, and one driveway off the SR 99 Frontage Road to the south.

The project proposes to connect to existing wastewater lines managed by the City of Stockton with a new 8-inch-diameter sanitary sewer line extension east from an existing line in Hammer Lane approximately 175 feet across the Maranatha Drive intersection to a new manhole in Hammer Lane at the northwest corner of the project site (Figure 2-8). Water service would be provided by a 12-inch-diameter water line extending from an

existing City main along Hammer Lane south along the project frontage on Maranatha Drive, which would be installed as part of another project. An on-site storm drainage collection and treatment system would be installed, which would treat collected drainage before it is discharged to existing City storm drainage lines. Existing electrical, natural gas, and telecommunication lines along Hammer Lane would be utilized as needed to provide these services to the project site.

All proposed buildings shall each be constructed as a single-story wood or metal stud frame structure with conventional footing and concrete slab on grade. All buildings would be heated and cooled with mechanical ventilation per current California Building Code requirements. For the restaurants, kitchen hoods would be exhausted per current California Building Code requirements. The car wash itself would be open air unconditioned space, but enclosed spaces associated with this facility shall be provided with natural or mechanical ventilation per the California Building code requirements. Fire suppression shall be per California Building Code and local jurisdictional requirements. All rooftop mechanical units and equipment would be screened by parapet walls.

As noted, the proposed development would not require a General Plan amendment, and the parcel would be pre-zoned to allow for commercial development upon annexation. The proposed commercial uses are consistent with the existing General Plan designation and allowable under the proposed pre-zoning of the site; restaurants are allowable by-right in the proposed CG zone, while the convenience store, fueling station, and car wash uses require Planning Commission or administrative approvals. Alcoholic beverage sales, proposed for the convenience store and the Black Bear Diner, would require licensing from the State's Department of Alcoholic Beverage Control. The necessary development approvals are, however, within the range of probable development-related activities considered in the GPEIR.

Hotel Development

APNs 130-030-06 and 130-030-07, totaling approximately 3.7 acres, would be developed as a hotel (Figure 2-6). Figure 2-7 shows the plans for the first floor, and Figure 2-8 shows the hotel elevations. The hotel is anticipated to be a dual-brand hotel occupied by Fairfield Inn and Suites and by TownePlace Suites. The hotel building would have four stories and approximately 81,484 square feet of floor area.

The hotel building would have 141 suites available for visitors. Fairfield Inn and Suites would occupy the western side of the building, with 81 suites available for short stays. TownePlace Suites would have the remaining 60 suites on the eastern side of the building. These suites would be available to extended-stay travelers. Between these two sides would be a lobby, registration area, and a lounge. Also proposed in this building area is a bar and restaurant area, a meeting room, a fitness center, a gift shop area, a work room and office behind the registration area, a laundry room, and utility and storage rooms. A pool would be installed outside this area to the south.

Access to the hotel would be provided from two entryways off Hammer Lane, including an entry-only driveway that also would be used by the adjacent commercial center, subject to a mutual access agreement. There also would be an access way between the

commercial center and the south parking area for the hotel. The hotel would have approximately 200 parking spaces, available on all sides of the hotel building. A drive-up area would be available at the front entrance to the hotel, which would face Hammer Lane. Approximately 16,143 square feet of landscaping would be installed, mainly around the hotel property boundaries.

As with the commercial center, the proposed hotel development would not require a General Plan amendment. The proposed hotel is a “Permitted” use under the proposed CG pre-zoning and would not require additional discretionary action. The hotel development would, however, require a demolition permit for removal of existing structures. A merger of the two parcels that make up the hotel site may be required to prevent hotel construction across property lines.

Provision of utility service to the hotel portion of the project will require off-site improvements. These improvements will be subject to the review and approval of the City Municipal Utilities and Public Works departments and a review of their consistency with adopted wastewater, water and storm water master plans. Off-site improvements required for the hotel portion of the project will include the following:

New 10-inch-diameter water service line connecting the site to an existing 24- inch-diameter water main in Hammer Lane adjacent to the site.

New 8-inch-diameter sanitary sewer line from the hotel site to a new manhole in Hammer Lane at the proposed joint site entry, and an 8-inch-diameter sanitary sewer line extending west along the Hammer Petroleum frontage to a manhole at the corner of Hammer Lane and Maranatha Drive to be installed by the adjacent project.

A 12-inch-diameter storm drain connecting the proposed on-site bioretention areas to an existing catch basin in Hammer Lane adjacent to the site, and a 15- inch-diameter storm drain connecting to a proposed storm drain manhole to be constructed on the adjacent property to the west. Both lines ultimately connect to an existing 24-inch-diameter storm drain in Hammer Lane.

The proposed hotel uses are consistent with the existing General Plan designation and proposed pre-zoning of the site, and the necessary development approvals are within the range of probable development-related activities considered in the GPEIR.

2.2 PROJECT-RELATED CHANGES TO STOCKTON 2040

GPEIR PROJECT DESCRIPTION

This Initial Study/Addendum considers the proposed annexation and development project as described above and analyzes the project’s potential environmental effects in the context of, and compared to, the relative environmental impacts of implementing the General Plan through 2040 as described in the GPEIR. In order to make this analysis, the Initial Study/Addendum must identify differences between the project as addressed in the GPEIR – that is, between the future development of the project site pursuant to the

General Plan's land use designation – and the proposed retail commercial and hotel development project. Chapter 3.0 will determine whether any of these differences might lead to new or more severe environmental effects than were described in the GPEIR and/or whether there is a need for additional mitigation measures to address those new or more severe impacts.

This section also considers whether there are changes in the circumstances surrounding the Stockton 2040 General Plan since its approval, and the GPEIR since its certification, how they relate to the environmental effects of the proposed project, and whether these changes require “major” revisions to the certified EIR.

Changes to GPEIR Chapter 1.0 Introduction

Chapter 1.0 in the certified GPEIR provided an overview of the Stockton 2040 General Plan, the type and use of the EIR, the EIR organization, and the CEQA process for the EIR. After certification of the EIR in December 2018, the General Plan was adopted. The General Plan was adopted approximately two years ago, and neither city-wide conditions nor conditions in the vicinity of the proposed project have changed considerably from the baseline conditions of the Plan and the GPEIR. One notable local change, the approval of the CarMax annexation and development project immediately west of the project site, is consistent with the General Plan designation of Commercial for that site as well as the proposed project site. The proposed project would involve a continuation of ongoing commercial development along the Hammer Lane corridor. The proposed project would not substantially change the conditions described in this GPEIR chapter nor change the circumstances in which the General Plan was adopted.

Changes to GPEIR Chapter 2.0 Summary

Chapter 2.0 of the certified EIR summarizes the content of the EIR, including potential environmental impacts and applicable mitigation measures of General Plan buildout. As concluded in Chapters 3.0 and 4.0 of this Initial Study/Addendum, the project would not result in any substantial change in the assumptions, environmental impact conclusions or mitigation measures specified in the GPEIR Summary.

Changes to GPEIR Chapter 3.0 Project Description

A summary of the Stockton 2040 General Plan is provided in Chapter 1.0 of this Addendum. As concluded in Chapter 4.0 of this document, the proposed project would not involve any substantial changes to this description connected with new or more severe significant environmental effects than those described in the GPEIR.

Since certification of the EIR, the City has annexed 13.26 acres west of the proposed project site for the CarMax development project. Like the proposed project, the approved CarMax project conformed to General Plan designation and zoning requirements and required no reconsideration of the environmental impacts described in the GPEIR.

No other substantial changes to the Stockton 2040 General Plan or to the circumstances of its adoption have occurred.

Changes to Chapters 4.1-4.15

These chapters are the environmental topic chapters that address the potential environmental impacts of the Stockton 2040 General Plan. Potential changes to these chapters associated with the proposed project are described in Chapter 3.0 of this Initial Study/Addendum. As concluded in Chapter 4.0 of this document, the proposed project would not involve any new significant environmental effects or cause any of the significant effects addressed in the GPEIR to be substantially more severe than were described in the GPEIR.

Changes to Chapter 5.0 Alternatives

Chapter 5.0 described alternatives to the Stockton 2040 General Plan, pursuant to CEQA requirements. As with the Stockton 2040 General Plan, the alternatives deal with issues at a plan level. Due to its relatively small size, which is less than 0.01% of the Stockton Planning Area and a small fraction of the proposed development contemplated by the 2040 General Plan, the proposed project development would not substantially alter the circumstances under which the alternatives were evaluated, nor would it make any of the alternatives more feasible to implement or more preferable to the adopted General Plan. In addition, because the proposed uses at the project site are consistent with the General Plan, the assumptions used to evaluate the alternatives would remain unchanged.

Changes to Chapter 6.0 CEQA-Required Assessment Conclusions

Chapter 6.0 of the GPEIR discusses the potential growth-inducing impacts of the Stockton 2040 General Plan, the significant and unavoidable environmental impacts as identified in the GPEIR, and the significant irreversible environmental changes associated with General Plan implementation. These issues were also evaluated at a plan level. The proposed project represents a fraction of the proposed development within the Planning Area and is consistent with the planned land uses for the project site. It would not substantially alter the circumstances under which these CEQA-required conclusions were reached.

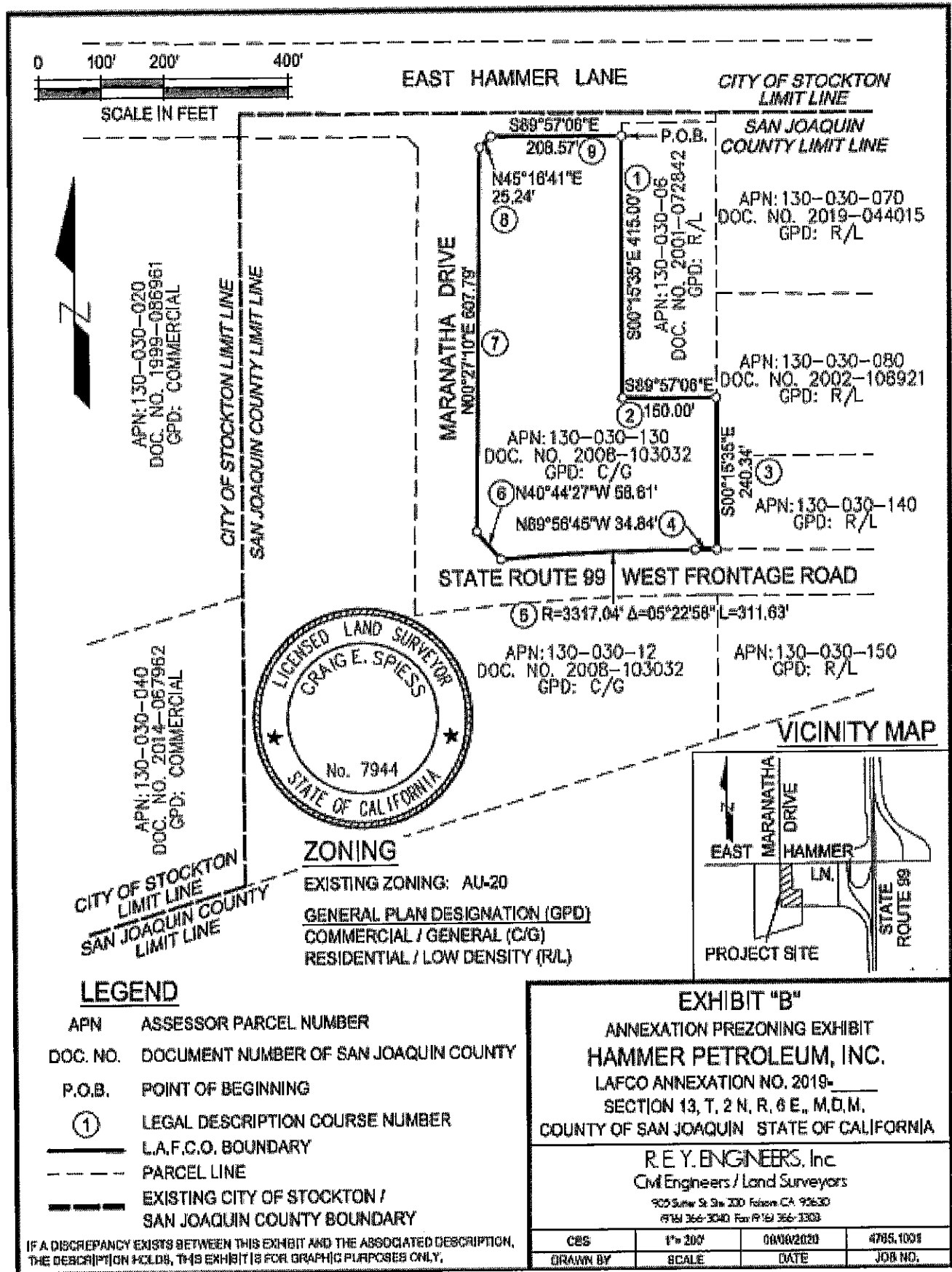


Figure 2-1
ANNEXATION/PREZONING
MAP-COMMERCIAL CENTER SITE

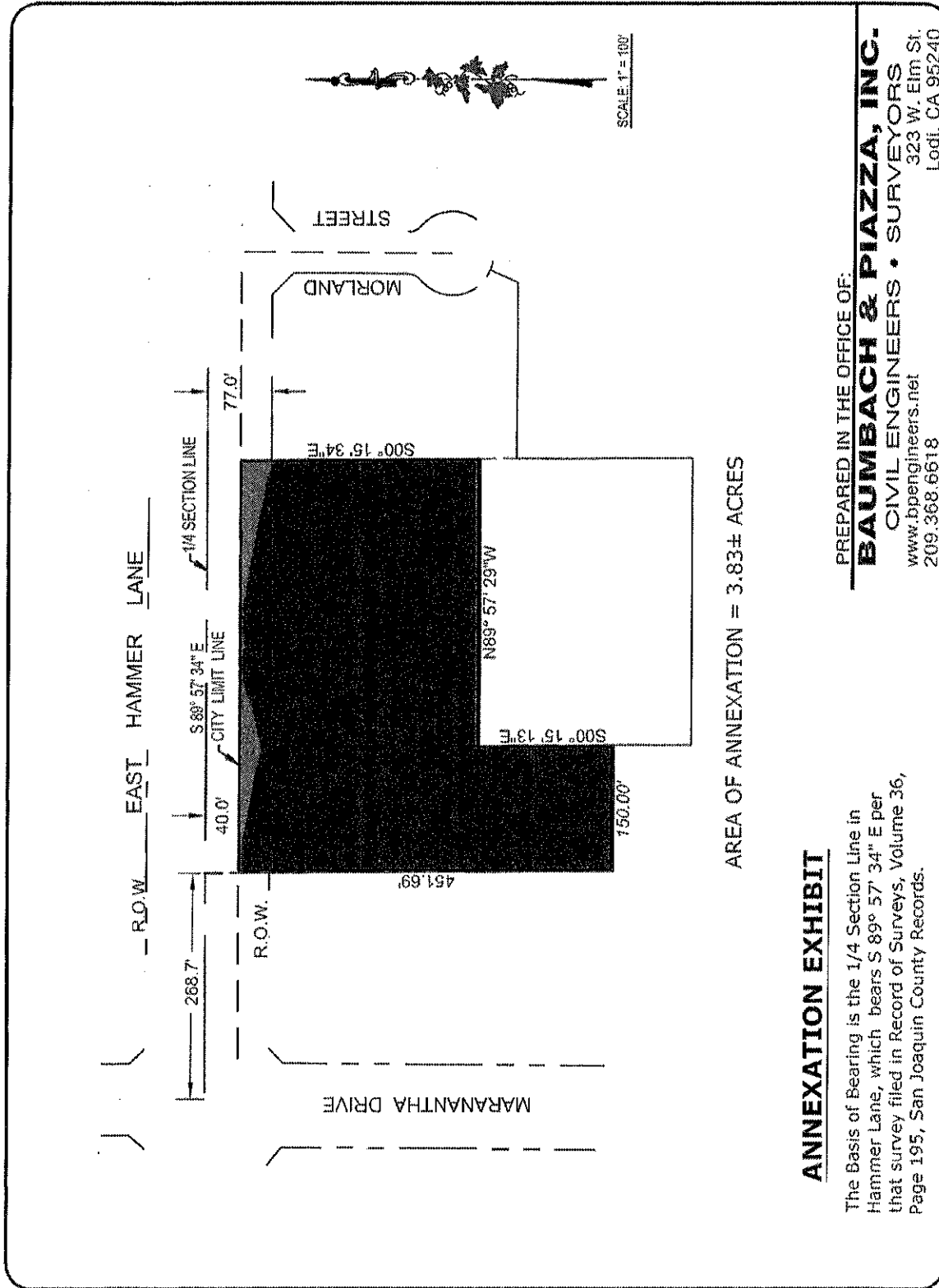
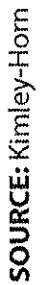


Figure 2-2
 ANNEXATION MAP- HOTEL SITE

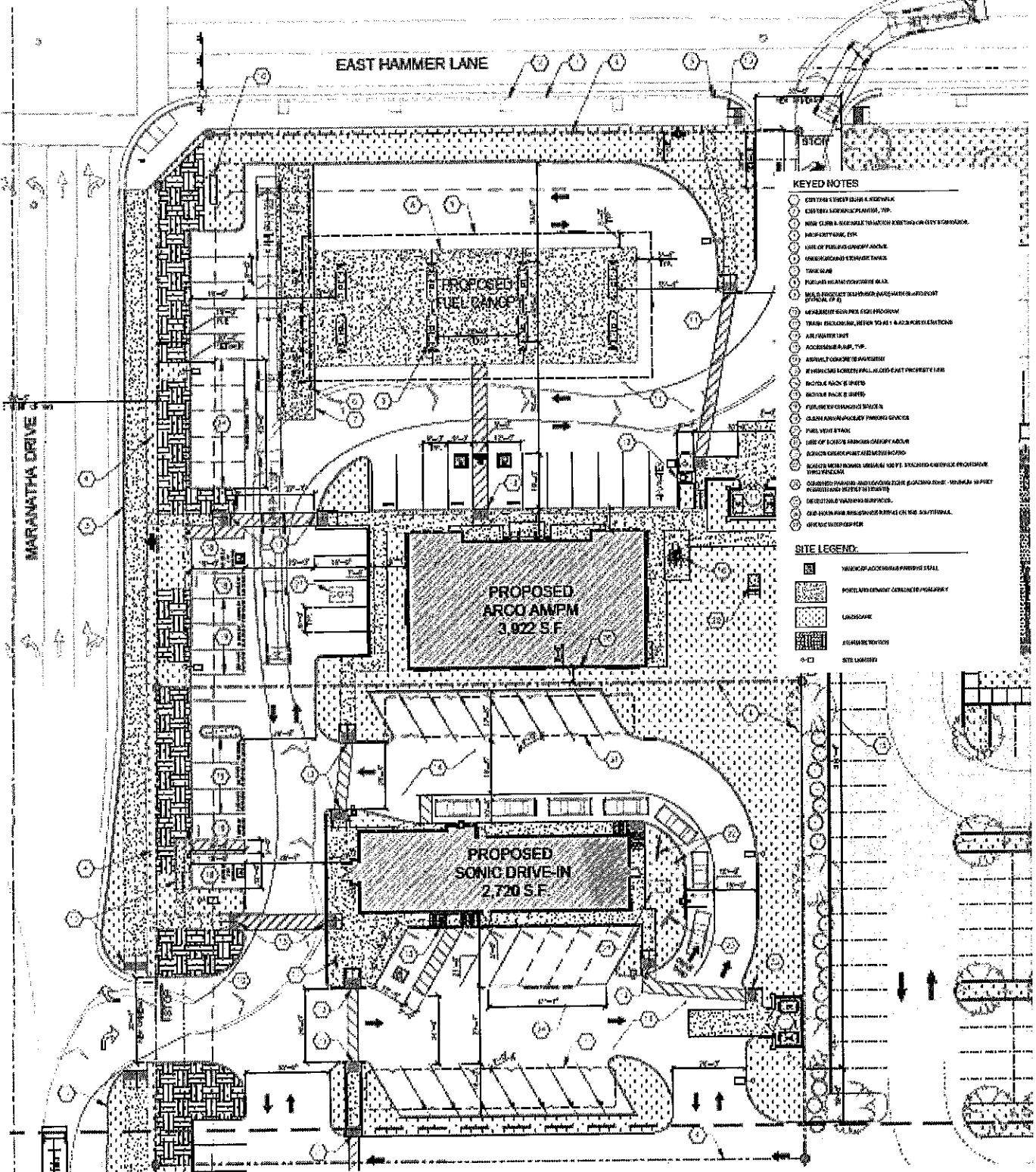


FILED AT "MILWAUKEE" 44-38862

SUBJECT PROPERTY IS LOCATED WITHIN ZONE X PER COMMUNITY
 PANEL NUMBER D07101000F, DATED OCTOBER 18, 2008.
 SHALL ON FLOODING FINDING PER SMC 18.00.002(1).

555 CAPITOL MALL, SUITE 300
SACRAMENTO, CA 95814
WWW.ANIMLEY-HORN.COM
TEL. (916) 665-6800
SEPTEMBER 2000
SHEET 1 OF 1

EXHIBIT 1 - Addendum



SOURCE: CSHOA

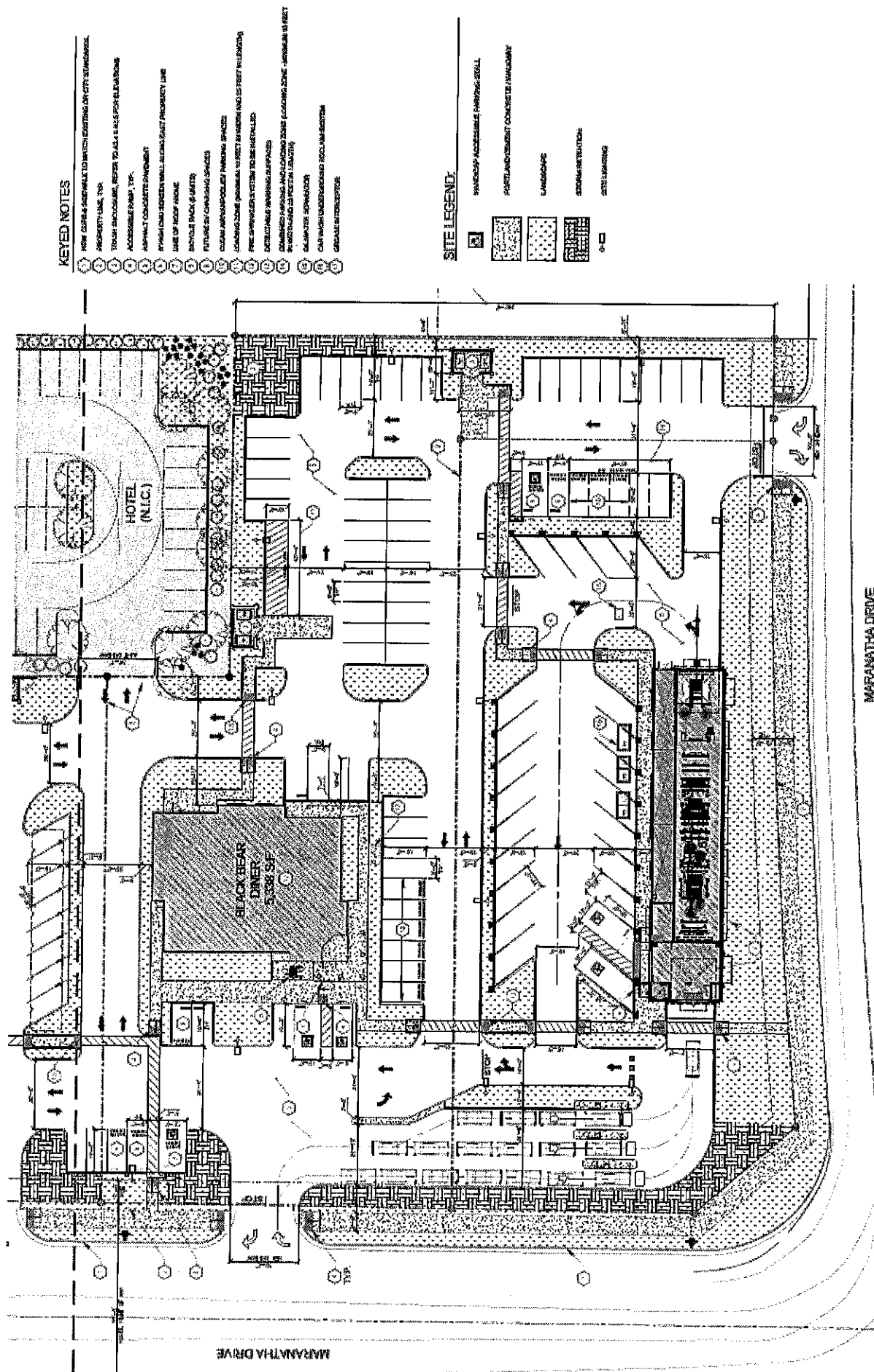
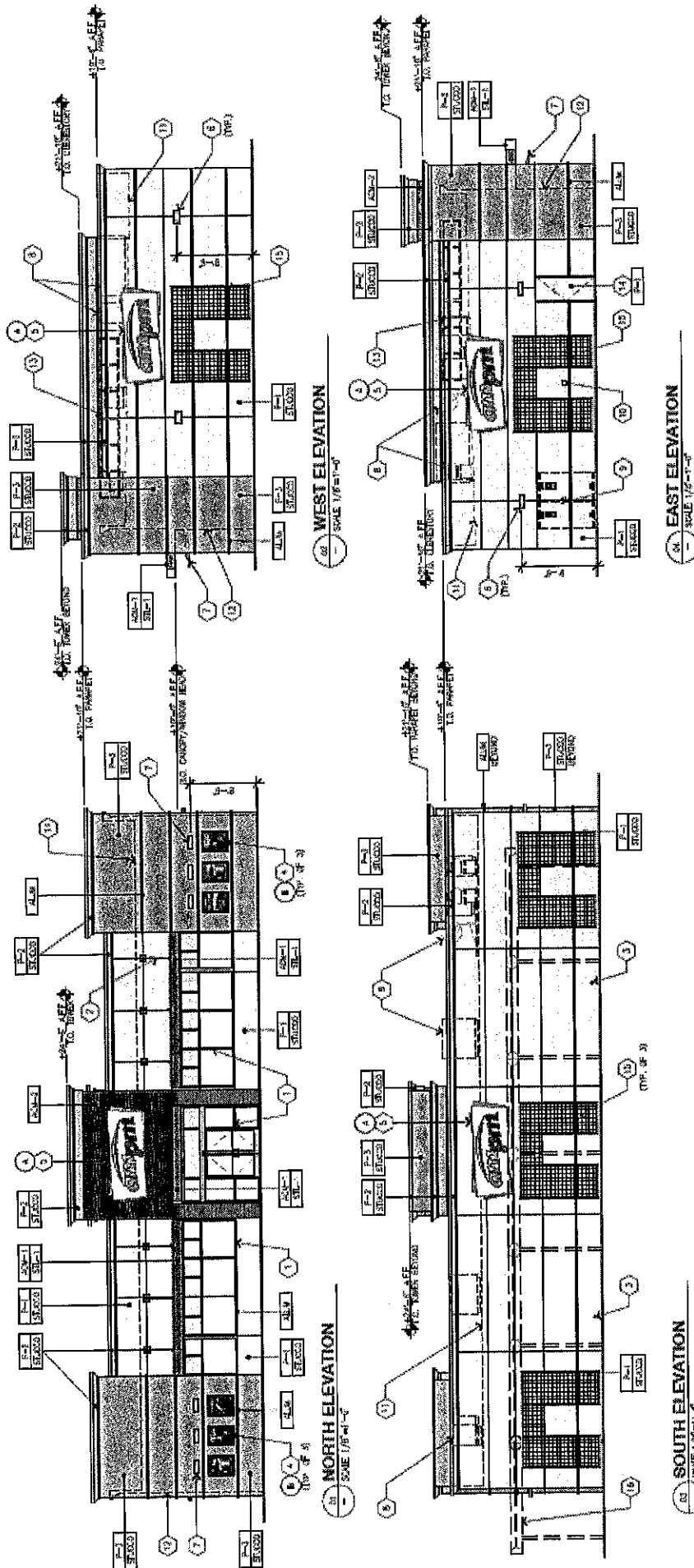
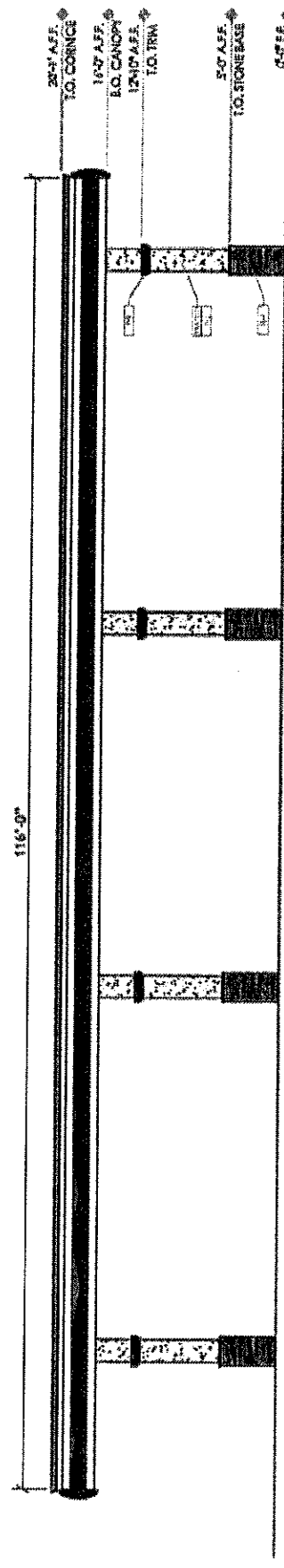
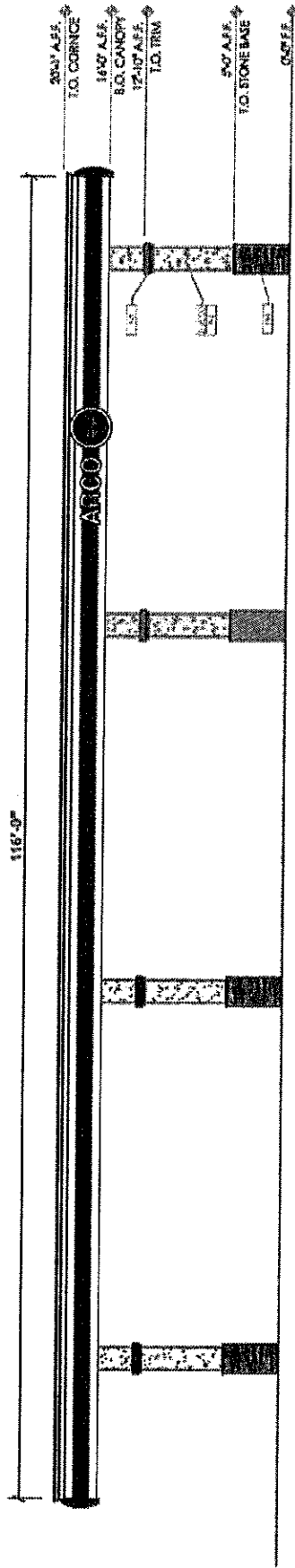


Figure 2-4C
BLACK BEAR/CAR WASH DETAIL



SOURCE: CSHOA

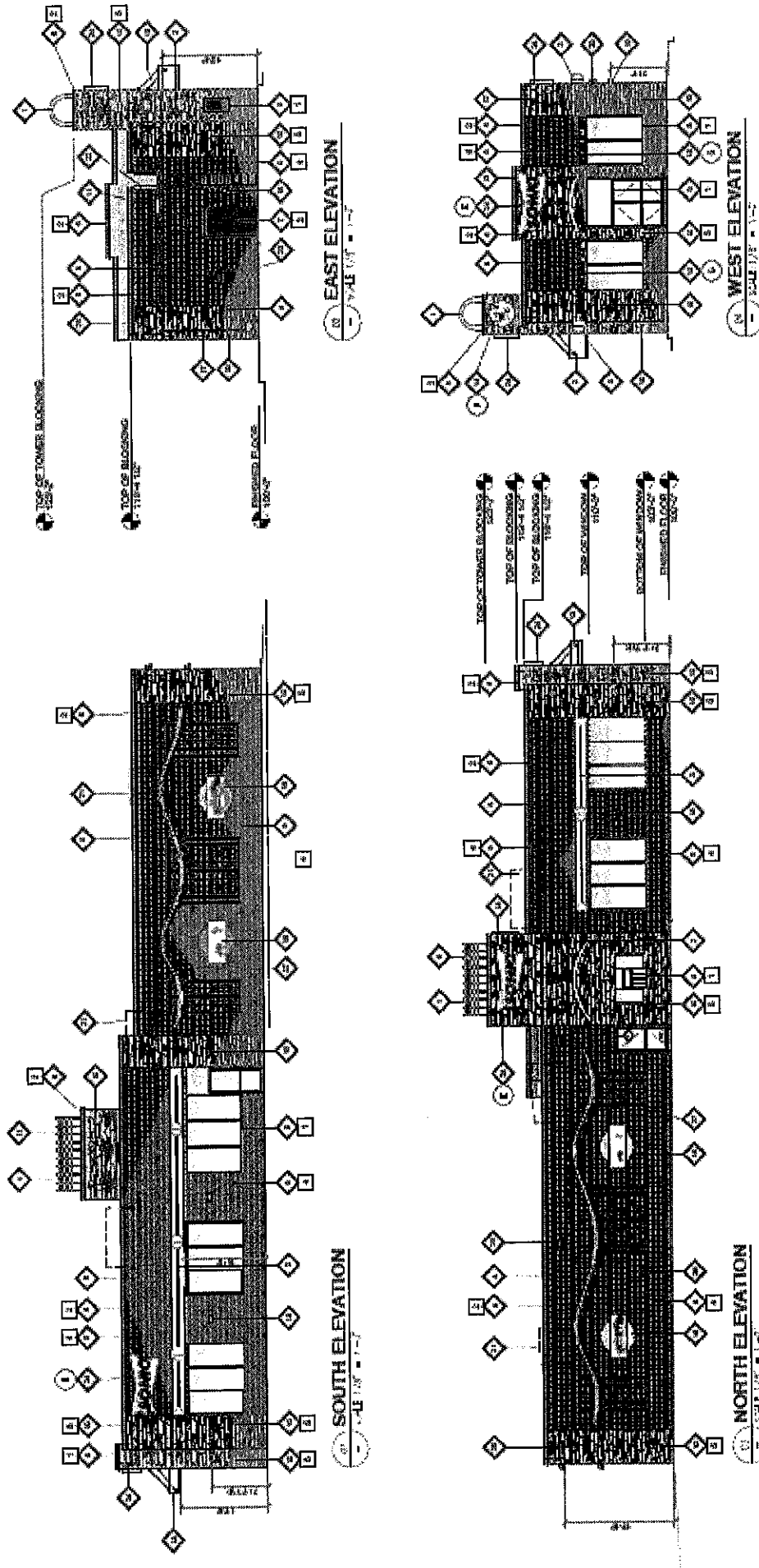
Figure 2-5A
AMPM ELEVATIONS



SOURCE: Loren Industries



Figure 2-5B
AMPM CANOPY ELEVATIONS



SOURCE: CSHOA

Figure 2-5C
SONIC ELEVATIONS

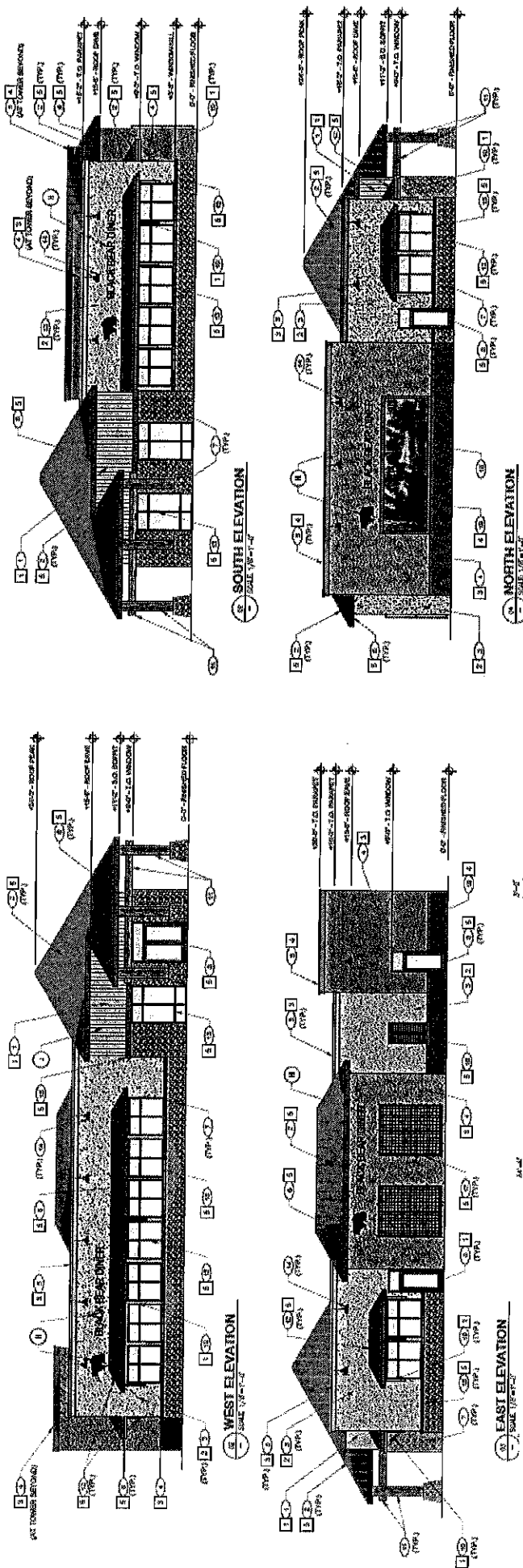


Figure 2-5D
BLACK BEAR ELEVATIONS

SOURCE: CSHOA

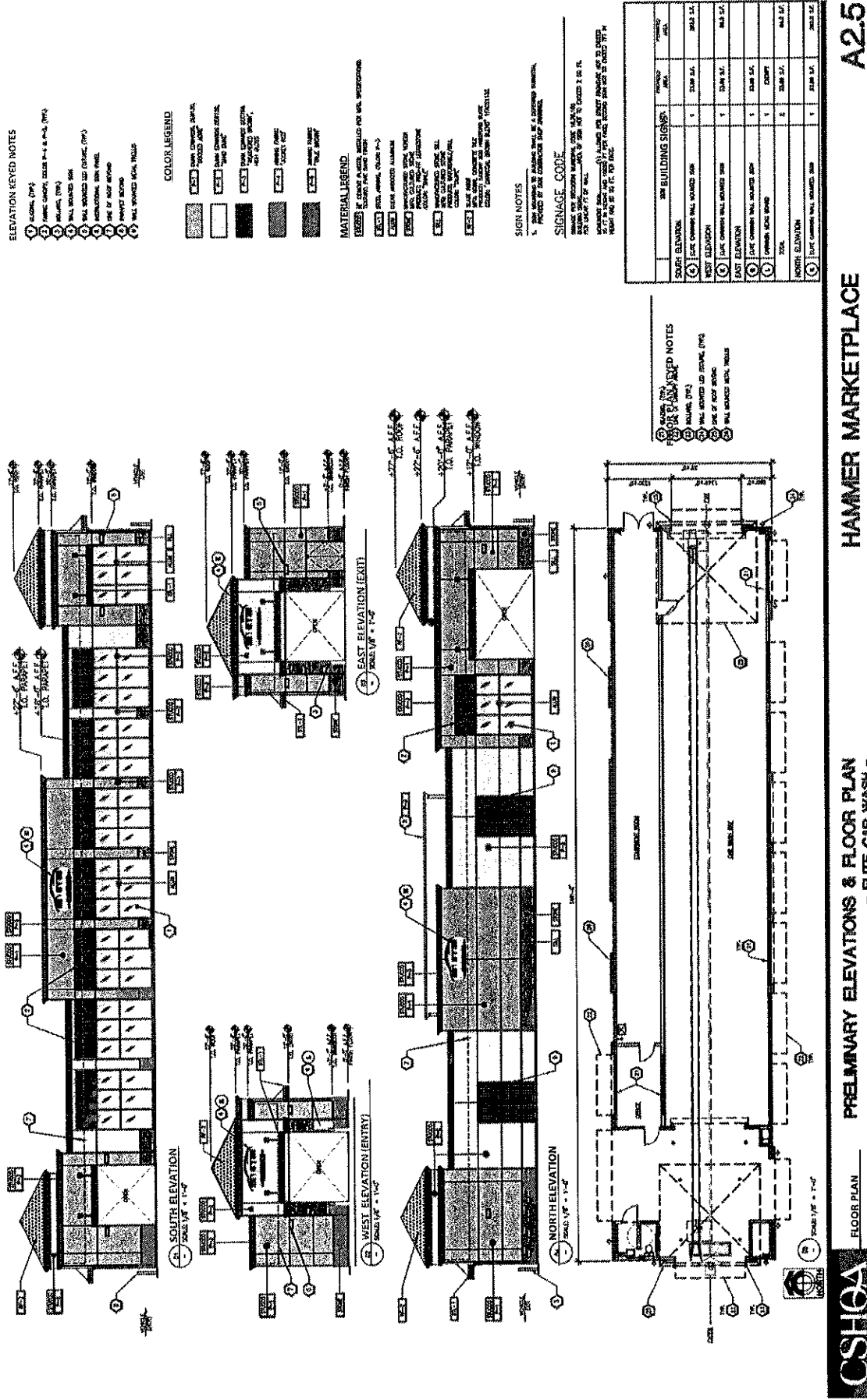
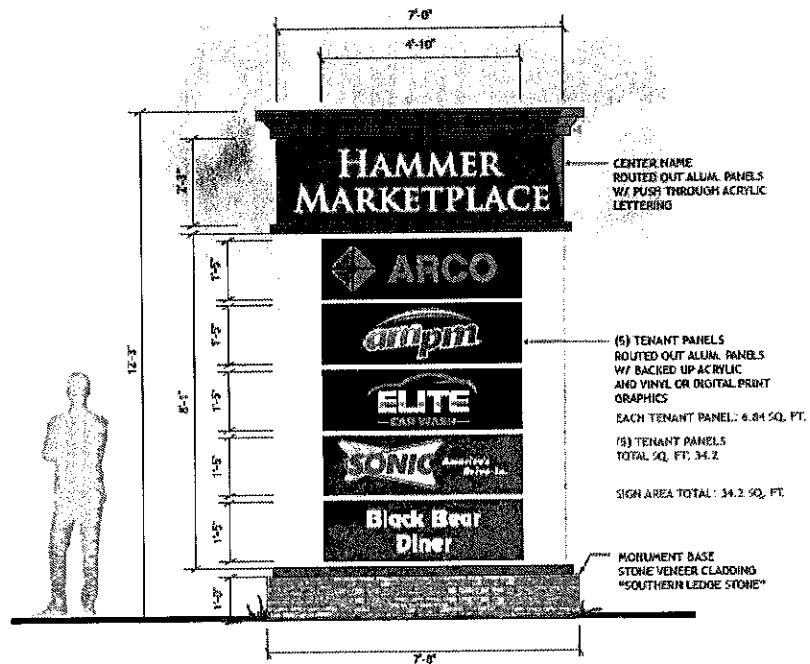
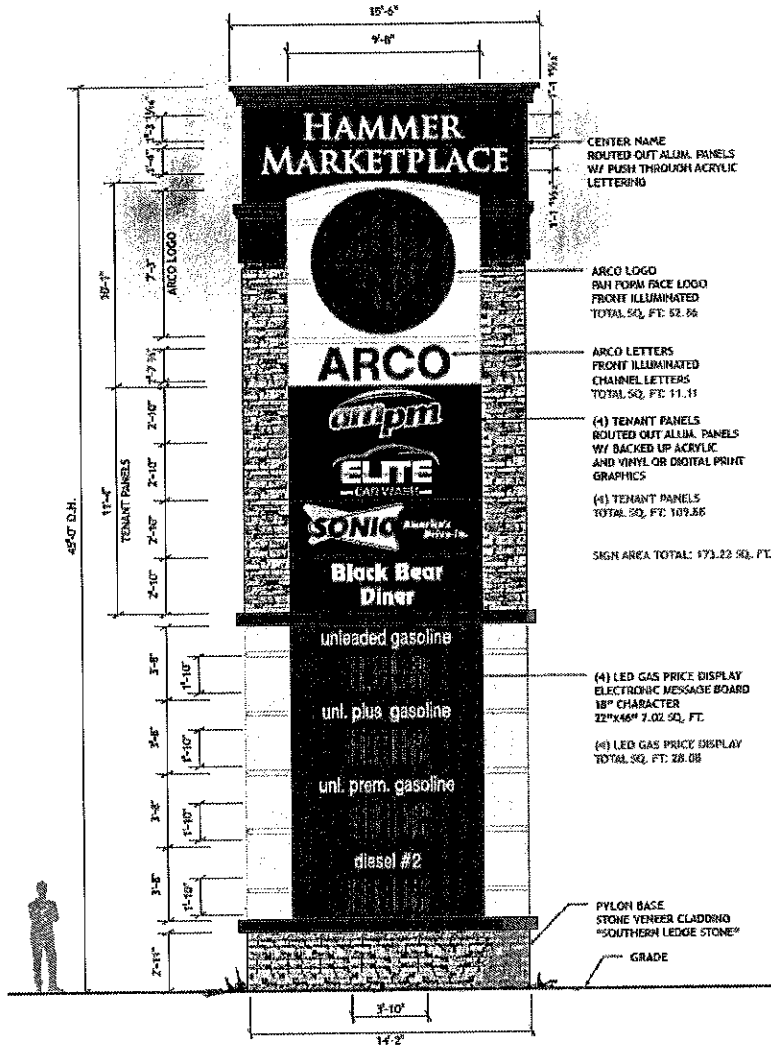




Figure 2-5E
CAR WASH ELEVATIONS



SOURCE: Loren Industries



Figure 2-5F
COMMERCIAL CENTER SIGNAGE



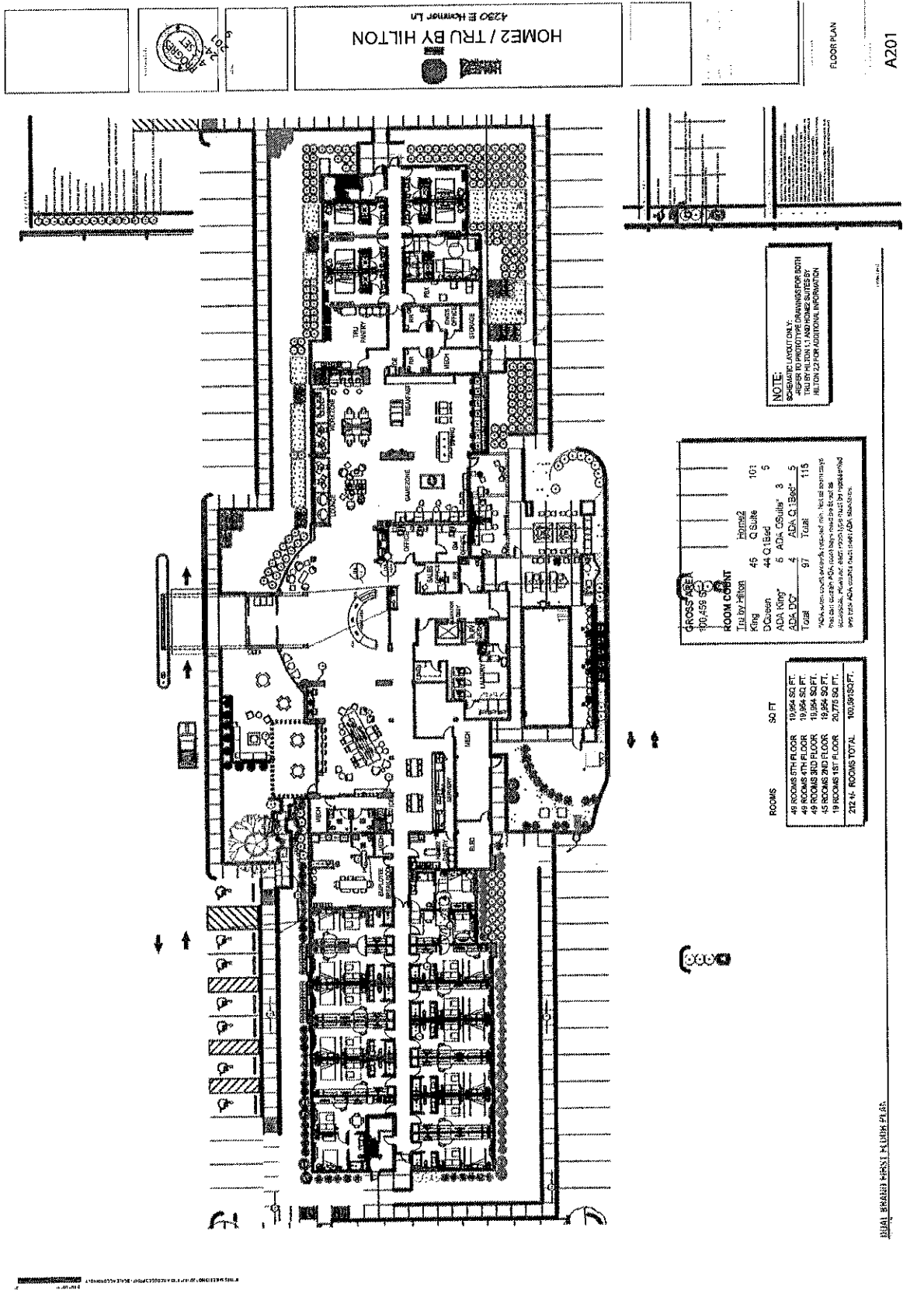


Figure 2-7
HOTEL FIRST FLOOR PLAN

11

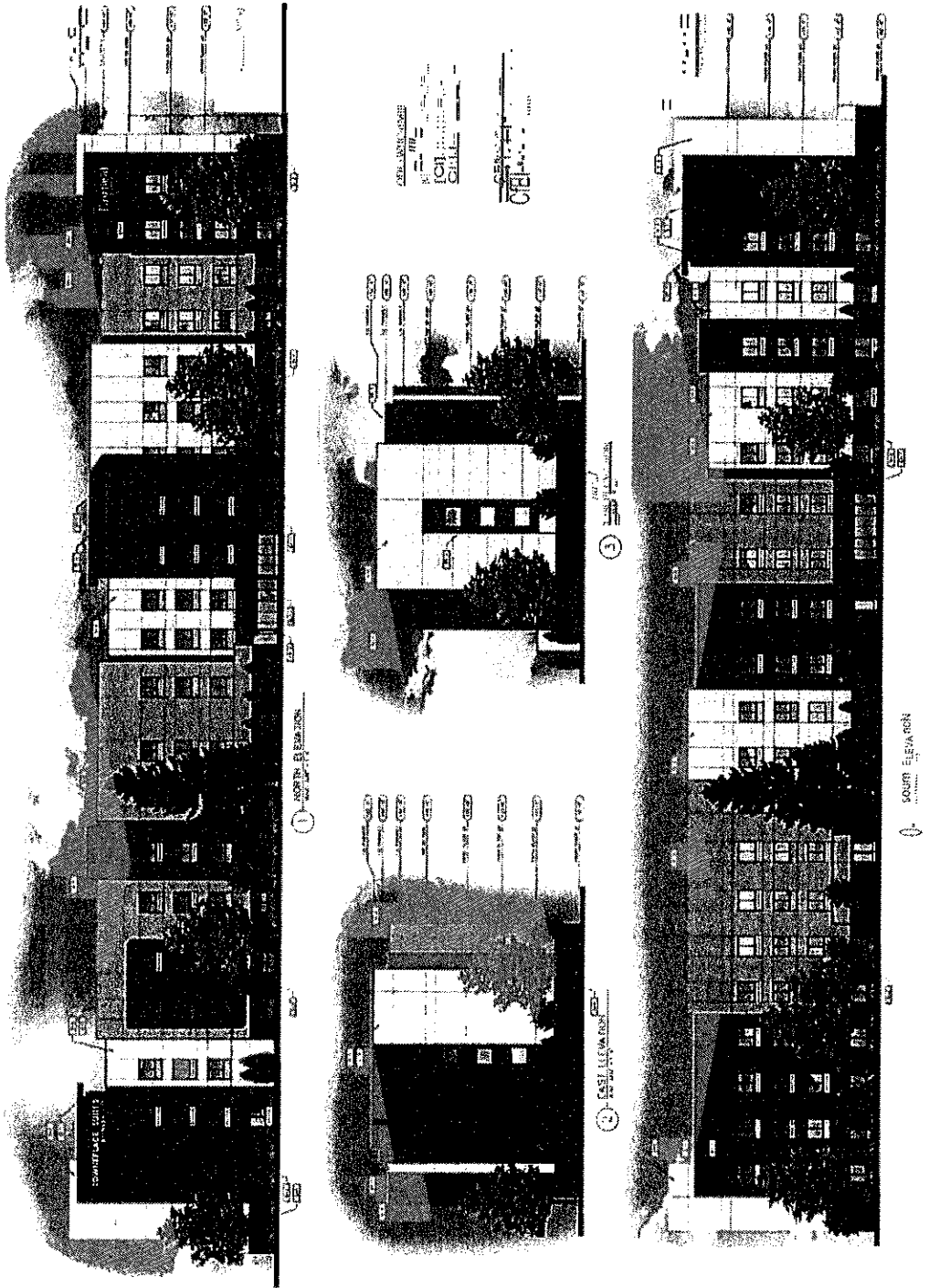


Figure 2-8
HOTEL ELEVATIONS

3.0 POTENTIALLY SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE REVISED PROJECT

3.1 INTRODUCTION

This chapter of the Initial Study/Addendum evaluates the potential environmental impacts of the proposed Hammer Lane Annexation and Development Project in comparison to the potential environmental effects of general commercial development of the project site as considered in the GPEIR. The analysis follows a template checklist of environmental issues analyzed in the GPEIR. In accordance with the requirements of CEQA Guidelines Section 15162 and 15168, the purpose of the checklist is to evaluate each of the environmental issues addressed in the GPEIR and determine whether the proposed project, changed circumstances, or new information of substantial importance could result in new significant environmental effects or a substantial increase in the severity of a previously identified environmental effect.

The checklist and accompanying narrative below describe the City's analysis and conclusions regarding the proposed project for each environmental issue in reference to the certified GPEIR. A "no" answer does not necessarily mean that there are no potential impacts related to the environmental issue, but that the project will not result in any change in the severity of the impact as discussed and if necessary as addressed with mitigation measures, in the GPEIR. Under these circumstances, a "no" answer indicates the proposed project does not result in any need to modify the conclusions of the GPEIR.

3.2 EXPLANATION OF CHECKLIST EVALUATION CATEGORIES

Conclusion in GPEIR – This column identifies the conclusion of the GPEIR relative to each environmental issue listed.

Does the project involve new impacts? – This column indicates whether the proposed project will result in new significant environmental impacts not previously identified or mitigated by the GPEIR, or whether the changes will result in a substantial increase in the severity of a previously identified significant impact, pursuant to CEQA Guidelines Section 15162(a)(1).

New circumstances involving new impacts? - This column indicates whether there have been substantial changes with respect to the circumstances under which the proposed project is undertaken that will require major revisions to the GPEIR, due to the involvement of new significant environmental impacts or a substantial increase in the severity of previously identified significant impacts pursuant to CEQA Guidelines Section 15162(a)(2).

New information requiring new analysis or verification? - Pursuant to CEQA Guidelines Section 15162(a)(3), this column indicates whether new information of substantial importance, which was not known and could not have been known with reasonable diligence at the time the GPEIR was certified, shows any of the following:

- The project will have one or more significant effects not discussed in the GPEIR;
- Significant effects previously examined will be substantially more severe than shown in the previous GPEIR;
- Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
- Mitigation measures or alternatives which are considerably different from those analyzed in the previous GPEIR would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative.

Where this analysis finds that the conclusions of the GPEIR remain the same; no new significant impacts are identified; previously identified impacts are not found to be substantially more severe; and additional mitigation is not necessary, then the checklist questions are answered "No", and no additional CEQA analysis would be required.

Mitigation required? - This column indicates whether mitigation measures are required to address project impacts. These include any mitigation measures identified in the GPEIR. If "None" is indicated, the GPEIR and/or this Addendum conclude that no impact occurs with the proposed project or the project impact is not significant. In both cases, no additional mitigation measures are needed.

3.3 ENVIRONMENTAL TOPICS

3.3.1 Aesthetics

Environmental Issue Area	Conclusion in GPEIR	Does the project involve new impacts?	New circumstances involving new impacts?	New information requiring new analysis or verification?	Mitigation required?
a) Scenic vistas	Less than significant	No	No	No	None required
b) Scenic resources, including but not limited to trees,	Less than significant	No	No	No	None required

rock outcroppings, and historic buildings within a State scenic highway					
c) Visual character and quality	Less than significant	No	No	No	None required
d) Light and glare	Less than significant	No	No	No	None required

Environmental Setting

GPEIR

Long-range views of open space and agricultural fields along the periphery of the city and riparian areas along the San Joaquin River and the Calaveras River are described as scenic vistas in the GPEIR. At the periphery of the city where these conditions occur, future development could adversely affect scenic vistas. General Plan policies and actions, Municipal Code requirements and the City's design review process would reduce development impacts on scenic vistas in these areas to a less than significant level. The project site is not located within any of these periphery areas.

There are no State-designated scenic highways in the GPEIR Study Area, but the San Joaquin County General Plan designates portions of I-5 and Eight Mile Road that traverse the GPEIR Study Area as scenic roadways. General Plan policies and actions, and Stockton Municipal Code sections, would reduce any potential impact from development in the City to a less than significant level. The project site is not located near either of these routes.

Scenic resources that contribute to the City's visual quality are described in the GPEIR as watercourses, existing open space, agricultural fields, and riparian areas as well as the Delta. Future development has the potential to degrade the quality of these resources. General Plan policies and actions and the City's design review process would prevent adverse impacts, produce a stable and desirable urban environment and result in less- than-significant impacts on visual character.

The GPEIR recognizes that future development would involve new street lighting or other lighting that would substantially increase lighting and potential glare levels. Exterior lighting is required to comply with City standards, which would ensure that impacts of new development associated with light and glare would be less than significant.

Project Site

The commercial site is flat, vacant land covered mostly with grasses and weeds. The hotel site contains a small church and school; a single-family residence has been recently removed together with most trees and shrubs. Two oak trees that would qualify as Heritage Oaks remain on the site (see Section 3.3.4, Biological Resources). Views from the project site are urban in nature, including retail commercial, vacant commercial property and an existing single- family, primarily single-story residential subdivision to the north across Hammer Lane. This subdivision is enclosed by a six-foot masonry wall, which inhibits

views of lands outside the subdivision boundary as well as views from the adjacent streets into the subdivision. Views to the south include open space lands designated for commercial development. Lands farther south are in agricultural production, mainly orchards.

Environmental Impacts and Mitigation Measures

a) Scenic Vistas.

The project site does not offer scenic vistas due to surrounding urban development and tree cover. The proposed project would have no impact in this issue area. Hammer Lane west of SR 99 is constructed to its ultimate planned width. The GPEIR did not identify significant aesthetic impacts along Hammer Lane.

b) Scenic Resources.

The project site is not adjacent to a designated scenic road. There are no significant scenic resources on the project site, other than two remaining oak trees. Section 3.3.4, Biological Resources, discusses impacts on oak trees and actions to reduce impacts. The proposed project would be subject to the General Plan policies and applicable provisions of the Municipal Code. Project impacts would be less than significant, consistent with the GPEIR findings in this issue area.

c) Visual Character and Quality.

The proposed project site is not near any prominent visual or aesthetic features. Views of nearby orchards are secondary to surrounding commercial development and land approved for commercial development. Project structures would be subject to design review to ensure consistency with City design guidelines, and any roof-top mechanical units and equipment would be screened by parapets. The project would be required to comply with the provisions of the Municipal Code, along with applicable General Plan Land Use Element policies and actions reducing potential impacts on visual character and quality to less than significant, consistent with the GPEIR findings in this issue area.

d) Light and Glare.

The proposed project would introduce an increased amount of lighting on the project site, mainly outdoor safety and security lighting, consistent with lighting requirements for commercial areas considered in the GPEIR. Development on the project site would comply with Municipal Code Sections 16.32.070 and 16.36.060(B), which set standards for outdoor lighting that minimize off-site spill light and glare, would reduce potential lighting impacts to a level that would be less than significant, consistent with the GPEIR findings in this issue area.

3.3.2 AGRICULTURAL AND FORESTRY RESOURCES

Environmental Issue Area	Conclusion in GPEIR	Does the project involve new impacts?	New circumstances involving new impacts?	New information requiring new analysis or verification?	Mitigation required?
a) Conversion of farmland	Significant and unavoidable even with mitigation	No	No	No	None required
b) Williamson Act contracts	Significant and unavoidable	No	No	No	None required
c) Conflict with zoning for forest land/timberland	No impact	No	No	No	None required
d) Conversion of forest land	Less than significant	No	No	No	None required
e) Indirect conversion of farmland or forest land	Less than significant	No	No	No	None required

Environmental Setting

GPEIR

The General Plan designates approximately 16,160 acres of farmlands of concern under CEQA for urban uses and would, over time, result in the conversion of these lands. The General Plan includes policies and actions that aim to concentrate growth and protect agricultural lands outside of the City from conversion. In addition, the GPEIR includes Mitigation Measure AG-1, which is shown in the MMRP in Appendix A. This mitigation requires participation in the City's agricultural conservation program, including dedication of agricultural conservation easements, or payment of an in-lieu mitigation fee. Nevertheless, even with these policies and actions, the impact related to farmland conversion was considered significant and unavoidable.

The GPEIR also identifies the potential for new development impacts on approximately 2,086 acres of prime farmland and 1,440 acres of non-prime farmland under active Williamson Act contracts. No mitigation is available for these effects, resulting in a significant and unavoidable impact. The project site is not subject to any Williamson Act contracts.

The City does not have zoning districts for forest or timberland. Limited forest areas exist in certain portions of the GPEIR Study Area, but none are located in the project vicinity. General Plan policies and actions would minimize any potential losses of forest land resulting in a less than significant effect in this issue area.

Project Site

The project site and surrounding areas have historically been used for agriculture, but urban development has displaced much of the agriculture in the area. The project site has not recently been in active agricultural use and does not include important farmlands as defined under CEQA. The project site has existing on-site development and is near existing urban-density single-family residences to the north and approved commercial development to the west. Active orchard land exists to the south of the project site.

Environmental Impacts and Mitigation Measures

a) Conversion of Farmland.

The 2016 Important Farmland Map of San Joaquin County, the most recent map available, has designated the proposed project site as Farmland of Local Importance and Urban and Built-Up Land. Farmland of Local Importance is not prime agricultural land and does not require mitigation for its conversion. GPEIR Mitigation Measure AG-1 would not apply to the project, as it addresses only Prime Farmland, Unique Farmland, and Farmland of Statewide Importance. Neither the County General Plan nor the Stockton General Plan has designated the project site for future agricultural use. Project impacts related to conversion of agricultural lands would be less than significant, consistent with the GPEIR findings in this issue area.

b) Williamson Act Contracts.

None of the parcels within the project site are under a Williamson Act contract. Therefore, the proposed project would have no impact related to Williamson Act contracts.

c) Conflict with Zoning for Forest Land/Timberland.

The project site is not zoned for forest or timberland; therefore, it would have no impact on this issue.

d) Conversion of Forest Land.

The project site is not in an area designated as forest land. Existing trees on the project site are not considered commercial timber. Because of this, the project would have no impact on forest land.

e) Indirect Conversion of Farmland or Forest Land.

The project is in an area largely developed and designated for urban development. The project site is within the City's Sphere of Influence and the proposed 10-year planning horizon, as set forth in the City's interim Municipal Service Review. Urban infrastructure has been extended to the project vicinity in anticipation of development of surrounding lands. The project would not involve any activity that would indirectly convert agricultural land to non-agricultural uses and therefore would have no impact in this issue area.

3.3.3 AIR QUALITY

Environmental Issue Area	Conclusion in GPEIR	Does the project involve new impacts?	New circumstances involving new impacts?	New information requiring new analysis or verification?	Mitigation required?
a) Generation of long-term criteria pollutant emissions	Significant and unavoidable even with mitigation	No	No	No	GPEIR Mitigation Measure AQ-3
b) Emissions from construction activities	Significant and unavoidable even with mitigation	No	No	No	GPEIR Mitigation Measure AQ-2
c) Emissions from development projects	Significant and unavoidable even with mitigation	No	No	No	GPEIR Mitigation Measure AQ-3
d) Short-term and long-term emissions from general plan buildout	Significant and unavoidable even with mitigation	No	No	No	None required
e) Toxic air contaminant exposure	Less than significant with mitigation	No	No	No	GPEIR Mitigation Measure AQ-5
f) Objectionable odors	Less than significant with mitigation	No	No	No	None required

Environmental Setting

GPEIR

New development would result in new transportation, area source and energy-related air pollutant emissions and contribute to the overall emissions inventory in the San Joaquin Valley Air Basin. Emissions from development pursuant to the General Plan would exceed the SJVAPCD regional significance thresholds and would affect compliance with existing adopted Air Quality Management. Construction activities would temporarily increase criteria pollutant emissions, varying by project type and size.

The General Plan contains numerous policies and actions that would contribute to minimizing long-term emissions, and various SJVAPCD rules and regulations, applicable to development projects, would also contribute in reducing emissions. Additional contributions to emission reductions would be made by GPEIR Mitigation Measures AQ-1 through AQ-5 (MMRP in Appendix A). These mitigation measures require participation in several City programs to reduce air quality impacts, including preparation of technical

analyses of potential reductions in construction and operational emissions, analysis of potential health risks and participation in the SJVAPCD Rule 9510 Indirect Source Review program. The GPEIR concluded, however, that impacts would remain significant and unavoidable, even with implementation of these policies, actions, and mitigation measures.

New development could generate new sources of toxic air contaminants (TACs), including carbon monoxide (CO) "hotspots" at congested intersections and TACs from various industrial and commercial processes. General Plan policies and actions, along with applicable SJVAPCD rules and regulations, would reduce potential health risk impacts to sensitive receptors to a less-than-significant level.

New development could generate new sources of odors, which are regulated under SJVAPCD Rule 4102, Nuisance. GPEIR Mitigation Measure AQ-6 requires projects that have the potential to emit nuisance odors, primarily industrial projects, beyond the property line to submit an odor management plan that reduces potential odors to acceptable levels. Implementation of this mitigation measure would reduce potential odor impacts to a level that would be less than significant.

Project Site

The project site is located within the northern portion of the San Joaquin Valley Air Basin (Air Basin). The Air Basin is designated Nonattainment/Extreme by the federal government, and Nonattainment/Severe by the state, for ozone. Both the state and federal governments classify the basin as Nonattainment for fine particulate matter (PM_{2.5}). The state also classifies the basin as Nonattainment for particulate matter (PM₁₀). Except for the Fresno urbanized area, the Air Basin is in attainment of, or unclassified for, carbon monoxide and other applicable standards.

Table 3-1 provides estimated air pollutant emissions, both construction and operational, for the proposed project and compares these emissions to the SJVAPCD significance thresholds. Emissions were estimated using the CalEEMod model, and results of the CalEEMod run are available in Appendix B of this Addendum. None of the projected emissions would exceed SJVAPCD significance thresholds.

TABLE 3-1
SJVAPCD SIGNIFICANCE THRESHOLDS
AND PROJECT AIR POLLUTANT EMISSIONS

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Significance Thresholds¹	10	10	100	27	15	15
Construction Emissions ²	0.60	2.05	1.87	<0.01	0.32	0.19
<i>Exceeds Threshold?</i>	No	No	No	No	No	No
Operational Emissions ³	2.48	8.90	11.49	0.04	2.58	0.73
<i>Exceeds Threshold?</i>	No	No	No	No	No	No

¹ Applies to both construction and operational emissions. Emissions in tons per year.

² Maximum tons in a calendar year.

³ Unmitigated emissions.

Sources: CalEEMod Version 2016.3.2, SJVAPCD 2015.

Environmental Impacts and Mitigation Measures

a) Generation of Long-Term Criteria Pollutant Emissions.

As shown in Table 3-1, the estimated project emissions would not exceed the general plan mitigation measures AQ-2 and AQ-3 as well as SJVAPCD thresholds. Moreover, the estimates do not take into consideration project features that would tend to reduce emissions (e.g., proximity to public transit, installation of sidewalk, water conservation and waste reduction requirements). Even without mitigation, project effects on criteria pollutant emissions would be less than significant.

Project development would be required to comply with SJVAPCD Rule 9510, Indirect Source Review. Rule 9510 requires specified development projects to reduce construction emissions of NO_x and PM₁₀ exhaust by 20% and 45% respectively, and operational emissions of NO_x and PM₁₀ by 33.3% and 50% respectively. Rule 9510 requirements would further reduce the project's less than significant effects. Implementation of GPEIR mitigation measures would contribute to Rule 9510 emission reductions and may result in additional reductions. Project development would not generate long-term criteria pollutant emissions in amounts significant enough to affect attainment of adopted Air Quality Management Plans. Project impacts related to long-term criteria pollutant emissions would be less than significant, consistent with the GPEIR findings in this issue area.

b) Emissions from Construction Activities.

As noted in Table 3-1 above, construction emissions from proposed development of the site are not expected to exceed SJVAPCD significance thresholds. As noted above, the project's emissions would not affect attainment of adopted Air Quality Management Plans

and would therefore be less than significant, consistent with the GPEIR findings in this issue area.

c) Emissions from Development Projects.

As noted in Table 3-1 above, operational emissions from proposed development of the site are not expected to exceed SJVAPCD significance thresholds. As noted above, the project's emissions would not affect attainment of adopted Air Quality Management Plans and would therefore be less than significant.

d) Short-Term and Long-Term Emissions from General Plan Buildout.

As noted in Table 3-1, construction and operational emissions generated by the proposed development on the project site would not exceed SJVAPCD significance thresholds. As noted above, the project's less than significant emissions would not affect attainment of adopted Air Quality Management Plans and would therefore be less than significant. Also, proposed development is consistent with the land use designations of the Stockton 2040 General Plan for the project site. Project impacts related to development emissions would be less than significant.

e) Exposure to Toxic Air Contaminants (TACs).

SJVAPCD guidelines indicate that potential CO impacts at intersections could be significant if a traffic study for the project indicates that the Level of Service (LOS) on one or more streets or at one or more intersections in the project vicinity will be reduced to LOS E or F, or if the project will substantially worsen an already existing LOS F on one or more streets or at one or more intersections in the project vicinity (SJVAPCD 2015). Based upon a traffic study for the project (KD Anderson 2020), the existing LOS at the Hammer Lane/Maranatha Drive intersection is B, and future development in the project vicinity would cause the LOS at the intersection to decline to C, which does not meet the criteria for significance of CO impacts.

Project construction would involve emissions of diesel PM, which is classified as a TAC, near sensitive receptors. Diesel PM emissions would have adverse effects only for people that experience long-term exposure, and construction emissions would cease once work is completed. Therefore, impacts of diesel PM construction emissions on nearby sensitive receptors are considered less than significant. Operational emissions of diesel PM, mainly from delivery trucks, are estimated by CalEEMod to be slightly greater than 0.5 tons annually (see Appendix B, exhaust PM₁₀). This level is not expected to lead to significant exposure by any nearby sensitive receptors, including the residential subdivision north of the site.

The project would include a fueling station with two underground storage tanks and 16 pumps. Fueling can emit vapors that are considered TACs. As part of the County's evaluation of the previous Hammer Petroleum project, a screening-level health risk assessment was conducted to determine if emissions from fueling station operations would pose a significant health risk to the residences across Hammer Lane from the project site. The results of the health risk assessment, available in Appendix B, indicate

that public risk from exposure to TAC emissions from the fueling would not be significant for chronic or acute health effects (EPS 2019). Overall, project impacts related to exposure to TACs would be less than significant. All of the above-described effects of the project would be consistent with the GPEIR findings in this issue area.

f) Objectionable Odors.

GPEIR Table 4.3-5 lists odor sources of concern as identified by SJVAPCD, along with the screening distance from each source. The project does not contain any of the odor sources identified in GPEIR Table 4.3-5, nor is the project site within screening distance of any of these sources. Project impacts related to odors are considered less than significant, consistent with the GPEIR findings in this issue area.

3.3.4 BIOLOGICAL RESOURCES

Environmental Issue Area	Conclusion in GPEIR	Does the project involve new impacts?	New circumstances involving new impacts?	New information requiring new analysis or verification?	Mitigation required?
a) Special-status species	Less than significant	No	No	No	None required
b) Riparian and other sensitive habitats	Less than significant	No	No	No	None required
c) Federally protected wetlands	Less than significant	No	No	No	None required
d) Fish and wildlife movement and native nursery sites	Less than significant	No	No	No	None required
e) Local biological resource policies and ordinances	Less than significant	No	No	No	None required
f) Conflict with habitat conservation plans	Less than significant	No	No	No	None required

Environmental Setting

GPEIR

New development pursuant to the General Plan involves potentially significant effects on several special-status species. For the most part, these species are covered by required participation in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP). Participation in the SJMSCP requires preconstruction surveys by a qualified biologist, payment of SJMSCP fees and developer compliance with Incidental Take Minimization Measures specified by the SJMSCP management agency. The net result

of development project participation in the SJMSCP is the reduction of biological impacts on covered species to a less than significant level.

Development may also have potential impacts on special-status species not covered by the SJMSCP. These potential effects are addressed by policies and actions in the General Plan that would reduce potential impacts to a less-than-significant level.

The GPEIR identifies riparian vegetation areas (i.e., areas adjacent to streams) and three sensitive natural communities - coastal and valley freshwater marsh, great valley oak riparian forest, and valley oak woodland - as biologically sensitive. Various General Plan actions reduce potential development impacts on these resources to less than significant. There are, however, none of these resources on or near the project site.

Similarly, new development could impact federally protected wetlands through dredging or filling, or by developing upstream of wetlands and affecting water quality. Development in these areas require a wetland delineation and permit from agencies with jurisdiction. The GPEIR concluded that potential impacts to federally protected wetlands would be less than significant. There are, however, no such resources on or near the project site.

Waterways may provide wildlife movement corridors, but no wildlife movement corridors are mapped in the General Plan or GPEIR. New development could impact migratory mammal and bird species, but the GPEIR indicates that compliance with a range of General Plan policies and actions would reduce potential movement impacts to a level that would be less than significant.

The City of Stockton's Heritage Tree Ordinance (Stockton Municipal Code Section 16.72.245) protects specific types of oak trees, called Heritage Oaks, from removal without a permit. Projects that comply with the Heritage Tree Ordinance would have a less-than-significant impact on oak trees. No other local biological resource policies or ordinances were identified in the GPEIR, and no habitat conservation plans are applicable to the Stockton area other than the SJMSCP.

Project Site

The project site is largely vacant land located at the southeast corner of Hammer Lane and Maranatha Drive. The general project vicinity contains a mix of urban development, vacant land and orchards. Historically, the site has been used for agricultural purposes. Existing development on the hotel site includes a small church and a school; a single-family residence was recently demolished and removed from this site.

Based on site visits by BaseCamp Environmental personnel, vegetation on the project site currently consists of grasses and weeds, with scattered shrubs and a few trees on the hotel portion of the site. The trees include a mature oak tree with a diameter of 55 inches at two feet above grade and a semi-mature oak tree with a diameter of 23 inches at two feet above grade (Gianelli Company 2020). Site vegetation is dominated by a mixture of non-native annual grasses and weedy species that tend to colonize quickly after land disturbance, such as black mustard, thistle, and wild radish. The western portion of the site is regularly mowed and disked for weed

control. There are no riparian or other sensitive vegetation communities located on the project site.

Wildlife common to ruderal habitats are likely to occur on the project site. Such wildlife species, which are closely associated with urban development, include the house sparrow, European starling, rock dove, western scrub-jay, black-tailed jackrabbit, raccoon, opossum, striped skunk, and house mouse.

Environmental Impacts and Mitigation Measures

a) Special-Status Species.

Searches of the U.S. Fish and Wildlife Service (USFWS) IPaC database and the California Natural Diversity Database (CNDDB) maintained by the California Department of Fish and Wildlife (CDFW) for the previous Hammer Petroleum project indicated the potential presence of several special-status plant and wildlife species. Most of these species are, however, considered unlikely to occur because of lack of suitable habitat. However, the project has the potential for incremental impacts on habitat for two special-status species: Swainson's hawk and burrowing owl. Both species are covered by the SJMSCP. Required compliance with the SJMSCP, including implementation of required Incidental Take Minimization Measures, would reduce potential proposed project impacts on these species to a level that would be less than significant, consistent with the GPEIR findings in this issue area.

b) Riparian and Other Sensitive Habitats.

The proposed project site does not include any riparian or other sensitive vegetation community described in the GPEIR. The project would have no impact on riparian or other sensitive communities.

c) Federally Protected Wetlands.

Site inspections and a review of the National Wetlands Inventory reveal no wetlands or other Waters of the U.S. on or adjacent to the proposed project site. The project would have no impact on federally protected wetlands.

d) Fish and Wildlife Movement and Native Nursery Sites.

The proposed project site is not adjacent to or near any streams. Given its location in a developing area, the project site is unlikely to provide wildlife corridors. Scattered trees on the project site could potentially be used by migratory birds for nesting. However, compliance with the SJMSCP and other General Plan actions would minimize impacts on wildlife, including migratory birds, resulting in less than significant impacts in this issue area, consistent with the GPEIR findings in this issue area.

e) Local Biological Resource Policies and Ordinances.

A consulting arborist found two oak trees on the hotel portion of the project site that would qualify as Heritage Oaks under the City's Heritage Tree Ordinance (Gianelli Company 2020). The arborist report is shown in Appendix C of this IS/Addendum. If

project development requires removal of either of these trees, then a permit would be required in accordance with the Heritage Tree Ordinance. If a permit for removal is approved, the removed trees are required to be replaced on a 3:1 basis at the discretion of the City, in accordance with Stockton Municipal Code Section 16.130.060. Compliance with the Heritage Tree Ordinance and related provisions would ensure that project impacts related to local biological resource policies or ordinances would be less than significant, consistent with the GPEIR findings in this issue area.

f) Conflict with Habitat Conservation Plans.

The project would participate in the SJMSCP and would therefore comply with SJMSCP provisions. No other habitat conservation plans apply to the project site. The project would have no impact related to habitat conservation plans.

3.3.5 CULTURAL AND TRIBAL CULTURAL RESOURCES

Environmental Issue Area	Conclusion in GPEIR	Does the project involve new impacts?	New circumstances involving new impacts?	New information requiring new analysis or verification?	Mitigation required?
a) Historical resources	Less than significant	No	No	No	None required
b) Archaeological resources	Less than significant	No	No	No	None required
c) Paleontological resources	Less than significant	No	No	No	None required
d) Human remains	Less than significant	No	No	No	None required
e) Tribal cultural resources	Less than significant	No	No	No	None required

Environmental Setting

GPEIR

New development under the General Plan could adversely affect archaeological and historical resources as well as tribal cultural resources by physically altering such resources or their surroundings. General Plan actions require identification of archaeological resources, evaluation of potential historical resources and early consultation with Native American representatives to identify locations of tribal importance. General Plan policies and actions require protection of archaeological, historical and tribal cultural resources when significant, including training of construction workers on appropriate avoidance and minimization measures and contingency measures if cultural resources are encountered during construction. Implementation of these actions and code provisions would reduce impacts on cultural resources to a less-than-significant level. The GPEIR did not identify any archaeological, historical or tribal cultural resources on or near the project site.

In its consideration of paleontological resources, the GPEIR noted that few fossils have been identified within the GPEIR Study Area, but there are geologic formations that could contain previously unidentified fossils. General Plan actions require identification and protection of paleontological resources if encountered, including through a treatment plan, in accordance with appropriate standards, where avoidance is not feasible. These actions would reduce impacts on paleontological resources to a level that would be less than significant. [Note: since certification of the GPEIR, a subsequent update to CEQA Guidelines Appendix G places paleontological resources in the Geology and Soils section of the Environmental Checklist.]

Human remains associated with archaeological sites or within previously unidentified historical cemeteries could be impacted by ground-disturbing activities associated with development. The Stockton Municipal Code requires notification of the County Coroner and Community Development Department Director and evaluation of the remains by a qualified archaeologist if human remains are discovered during construction. The Municipal Code contains provisions for the treatment of human remains if they are of Native American origin, and the CEQA Guidelines establish further requirements. In total, the GPEIR finds that these actions would reduce impacts related to human remains to a less than significant level.

Project Site

The project site is located within territory inhabited by the Northern Valley Yokuts. The project vicinity was historically used for a dairy operation until 1909, when new landowners planted cherry and walnut orchards.

According to the Central California Information Center of the California Historical Resources Information System records, three cultural resource studies have been conducted on the project site, and six studies have been conducted within a one-quarter-mile radius of the site. Two cultural resources have been recorded within, adjacent to, or overlapping the project site, and five have been recorded within a one-quarter-mile radius of the site. None of these resources are listed or eligible for listing on the National Register of Historic Places, the California Register of Historical Resources, California Points of Historical Interest, California State Historic Landmarks, or the California State Historic Resources Inventory.

A Native American site determined eligible for listing in the National Register of Historic Places (NRHP) was recorded in the immediate vicinity of the project site during environmental studies and construction of the Hammer Lane/SR 99 interchange. Due to the cultural resource sensitivity of the area, it was determined during the preparation of the Hammer Petroleum EIR that the commercial center site should be surveyed and subjected to subsurface testing to determine whether the previously recorded Native American site extended onto the property. Testing, consisting of 675 feet of backhoe trenches along the northern and western boundaries of the property was completed and monitored by Native American tribal representatives. The confidential testing report (Roper 2019) is available to qualified reviewers at the Stockton Permit Center.

The testing effort revealed no intact cultural deposits such as midden soil or human remains, and the supervising archaeologist concluded that it was unlikely that development

of the Hammer Petroleum project would affect important archaeological, historical, or other cultural resources. The archaeologist recommended that all construction personnel receive brief "tailgate" training by a qualified archaeologist in the identification of buried cultural resources, including human remains, and protocol for notification should such resources be discovered prior to excavation for project development. The same conclusion and recommendations would apply to the proposed retail commercial project, which is located on the same site as the proposed Hammer Petroleum project.

If buried archaeological deposits are encountered during development activities, the archaeologist recommended that work in the immediate vicinity of the discovery cease until the finds have been evaluated by a qualified archaeologist. Should human remains be encountered during development, the County Coroner must be contacted immediately; if the remains are determined to be Native American, then the Native American Heritage Commission must be contacted as well.

The proposed hotel site had not been subject to prior archaeological survey. Solano Archaeological Services was retained to conduct a record search and survey of the hotel site during the preparation of this Initial Study/Addendum. The confidential report (Solano Archaeological 2020) is available to qualified reviewers at the Stockton Permit Center.

Solano Archaeological researched the pre-historic, ethnographic and historical setting of the project site and conducted outreach to potentially affected Native American tribes. Solano also obtained a search of the California Historical Resources Information System records from the Central California Information Center at CSU Stanislaus. Solano conducted an intensive pedestrian survey of the site.

The record search indicated that the existing single-family house formerly located on the hotel site had been recorded in conjunction with prior archaeological work; however, the record indicated that the home was not eligible for listing on the National or California historic registers. This home was recently demolished. Past survey records indicate that the project site had been subject to archaeological survey in 2003, 2006 and 2008 and several other studies in the general vicinity. The research noted the presence of the recorded Native American site as discussed above.

In accordance with AB 52, the City contacted representatives of seven Native American tribes that the Native American Heritage Commission indicated should be contacted about the project, as the project site may be within a geographic area traditionally and culturally affiliated with these tribes and therefore may have Tribal Cultural Resources of value to them. Responses were received from three of the tribes contacted. The Ione Band of Miwok Indians requested a copy of the Solano Archaeological Services; no further contact was made. The United Auburn Indian Community indicated that no known Tribal Cultural Resources associated with the tribe were on the project site and provided recommendations for the treatment of inadvertent discoveries. The Wilton Rancheria recommended that a tribal monitor be present to treat and dispose of any finds. No other tribes contacted the City.

The pedestrian survey had limited ground visibility on the western parcel, but soils on the east parcel were substantially disturbed by demolition and cleanup activity. The existing church and school buildings were recorded as being of historic age; these structures were determined to be not eligible for historic listing. One new site was identified during the Hammer Lane Annexation Initial Study/Addendum

survey consisting of three isolated artifacts (isolates), consisting of large mammal bone fragments with no other associated artifacts or midden. The isolates were determined not eligible for historic listing, but their condition suggested they could be from a cultural resource context. As a result of this and proximity to other Native American sites of importance, Solano Archaeological recommended that all subsurface construction activity be monitored by a qualified, professional archaeologist. The previous Roper recommendations that would apply to inadvertent discoveries of buried archaeological resources would also apply on the hotel site. These requirements are consistent with the GPEIR. The Solano Archaeological recommendation is reflected in the mitigation measures below.

Environmental Impacts and Mitigation Measures

a) Historical Resources.

A records search conducted by the Central California Information Center for the previous Hammer Petroleum project indicated the presence of one potential historical resource on the project site – a single-family residence with ancillary buildings. This residence was removed; it was not listed or eligible for listing on the National Register of Historic Places or the California Register of Historical Resources or designated by the City or the County as an historical resource. As such, the residence was not considered to have significant historic value. Project impacts on historical resources are considered less than significant.

b) Archaeological Resources.

A records search conducted by the Central California Information Center for the previous Hammer Petroleum project indicated the presence of one potential archaeological resource on the project site. Subsequent testing of the site, including trenching, did not reveal the presence of any archaeological resources. A recent archaeological survey of the hotel site revealed the presence of several archaeological isolates that, together with other indications of potential archaeological sensitivity, indicate that the hotel site is sensitive for the discovery of buried archaeological materials during project construction. The archaeologist recommended archaeological monitoring of project site grading. This is not specifically provided for in General Plan actions or Municipal Code requirements, but is a more stringent requirement, consistent with the cultural resource sensitivity of the site and GPEIR requirements.

However, it is acknowledged that unknown archaeological resources may be encountered during project construction. As noted, General Plan actions and the Stockton Municipal Code require appropriate evaluation of unanticipated archaeological deposits. As a condition of approval for the project, all subsurface construction activity on the hotel site shall be monitored by a qualified professional archaeologist. Compliance with Municipal Code requirements, together with the following mitigation measure would reduce proposed project impacts on archaeological resources to a level that would be less than significant, consistent with the GPEIR findings in this issue area.

c) Paleontological Resources.

There are no known paleontological resources on the project site; however, it is possible that such resources could be encountered during construction activities. Compliance with

Municipal Code requirements and with General Plan Action LU-5.2D would reduce proposed project impacts on paleontological resources to a level that would be less than significant, which is consistent with the GPEIR findings in this issue area.

d) Human Remains.

There are no known human remains on the project site, and it is unlikely that any remains would be encountered given past agricultural and development activities. However, it is possible that unknown human remains could be encountered during construction activities. Compliance with Municipal Code requirements and with General Plan Action LU-5.2D would reduce proposed project impacts on human remains to a level that would be less than significant, which is consistent with the GPEIR findings in this issue area.

e) Tribal Cultural Resources.

As noted in b) above, an archaeological resource was recorded on the project site, but subsequent testing, which was monitored by a Native American representative, did not reveal the presence of any significant tribal resources. Tribal outreach during the cultural resource analysis of the hotel site did not reveal any additional tribal concerns. Compliance with Municipal Code requirements and with General Plan actions would reduce proposed project impacts on tribal cultural resources to a level that would be less than significant, consistent with the GPEIR findings in this issue area.

3.3.6 GEOLOGY, SOILS, SEISMICITY, AND MINERAL RESOURCES

Environmental Issue Area	Conclusion in GPEIR	Does the project involve new impacts?	New circumstances involving new impacts?	New information requiring new analysis or verification?	Mitigation required?
a) Fault rupture and other seismic hazards	Less than significant	No	No	No	None required
b) Soil erosion and loss of topsoil	Less than significant	No	No	No	None required
c) Unstable geologic units and soils	Less than significant	No	No	No	None required
d) Expansive soils	Less than significant	No	No	No	None required
e) Adequacy of soils to support wastewater disposal systems	Less than significant	No	No	No	None required
f) Loss of availability of mineral resources	Less than significant	No	No	No	None required

Environmental Setting

GPEIR

According to the GPEIR, there are no fault rupture or landslide hazards in the Stockton area; however, ground shaking is a potential hazard throughout Stockton, and seismically induced liquefaction is a potential hazard in some locations. State regulatory protections against these seismic hazards are provided by the Alquist-Priolo Earthquake Fault Zoning Act of 1972, the Seismic Hazards Mapping Act of 1990, and the California Building Code, adopted by the City. Compliance with these existing State and local laws and regulations ensure that the impacts associated with seismic hazards are minimized to a less-than-significant level.

The GPEIR noted that potential exists for soil erosion as a result of construction activities. Compliance with existing regulatory requirements, such as implementation of erosion control measures specified in the California Building Code, Chapter 15.48 of the Stockton Municipal Code, and the City's grading permit process, would mitigate the potential impacts of soil erosion and loss of topsoil to the maximum extent practicable.

The majority of the GPEIR Study Area does not appear to be subject to unstable geologic materials that are prone to subsidence, lateral spreading, or collapse. California Building Code requirements, along with the City's grading and building permit process, can provide protections where potentially serious geologic risks are known to be present and would reduce potential impacts to a less-than-significant level.

Soil plasticity (i.e., expansive or "shrink/swell" soils) in the Stockton area varies from site to site. Compliance with existing State and local laws and regulations, such as the California Building Code and the City's Municipal Code, and the City's grading and building permit process, would ensure that the impacts associated with development on expansive soils are minimized to the extent practicable, reducing impacts to a level that would be less than significant.

The GPEIR Study Area has been classified as an MRZ-1 zone, signifying that it is in an area where the available information indicates that no significant mineral deposits are present, or where little likelihood exists for their presence. This issue was considered by the GPEIR to be less than significant.

Project Site

The Geologic Map of the Sacramento Quadrangle (Wagner et al. 1981) designates the underlying geology of the project site as the Modesto Formation, consisting of Quaternary sediments. According to a custom soil report for the site, the soil type underlying the project site is Stockton clay, 0 to 2 percent slopes (USDA NRCS 2020), a common soil type in northeast Stockton. This is a deep to hardpan, somewhat poorly drained soil formed in alluvium from mixed rock sources. Permeability and runoff of the soil are slow, and its shrink/swell potential is high. Erosion hazard is very low.

Environmental Impacts and Mitigation Measures

a) Fault Rupture and Other Seismic Hazards.

The flat topography of the project site and its distance both from an active fault and from wet areas make it unlikely the project site would experience fault rupture, liquefaction, or landslides. The site could experience ground shaking; however, as noted in the GPEIR, compliance with the adopted California Building Code seismic requirements would reduce potential impacts related to seismic hazards to a level that would be less than significant, consistent with the GPEIR findings in this issue area.

b) Soil Erosion and Loss of Topsoil.

The underlying soil on the project site is Stockton clay, which has a low potential for wind and water erosion. The project would be subject to erosion control measures in the California Building Code, Chapter 15.48 of the Stockton Municipal Code, and the City's grading permit process. Also, the project site would be subject to the City's MS4 program, which incorporates the Construction General Permit process. The Construction General Permit, issued by the SWRCB, requires preparation of a Storm Water Pollution Prevention Plan (SWPPP) to address potential water quality issues associated with construction, as well as the incorporation of post-construction Best Management Practices that provide long-term water quality protection. Consistent with the GPEIR, project impacts related to soil erosion would be less than significant, consistent with the GPEIR findings in this issue area.

c) Unstable Geologic Units and Soils.

No potential geologic instability has been identified on the project site. The project would be required to comply with California Building Code requirements, along with conditions attached during the City's grading and building permit process as described in the GPEIR. Compliance with these measures would reduce potential impacts to a level that would be less than significant, consistent with the GPEIR findings in this issue area.

d) Expansive Soils.

Stockton clay soil has a high shrink-swell potential, which could adversely affect buildings and infrastructure on the project site. As described in the GPEIR, compliance with applicable State and local laws and regulations, such as the California Building Code and the City's Municipal Code, and the City's grading and building permit process, would reduce potential expansive soil impacts associated with the project to a level that would be less than significant, consistent with the GPEIR findings in this issue area.

e) Adequacy of Soils to Support Wastewater Disposal.

The GPEIR stated that development under the Stockton 2040 General Plan is not expected to require the use of septic systems or alternative wastewater disposal systems, which is also true for the project, which would connect to the City's wastewater collection and treatment system. This issue was considered less than significant in the GPEIR; the project would have no impact in this issue area.

f) Loss of Availability of Mineral Resources.

The project site does not have locally designated or known mineral resources, and no

mineral extraction activities, including oil or natural gas pumping, occurs on the site. Because of this, the project would have no impact on the availability of mineral resources.

3.3.7 GREENHOUSE GAS EMISSIONS

Environmental Issue Area	Conclusion in GPEIR	Does the project involve new impacts?	New circumstances involving new impacts?	New information requiring new analysis or verification?	Mitigation required?
a) GHG Emissions	Significant and unavoidable even with mitigation	No	No	No	None required
b) Conflict with GHG reduction plans, policies, and regulations	Less than significant	No	No	No	None required

Environmental Setting

GPEIR

Development allowed under the General Plan would contribute to global climate change through direct and indirect emissions of GHGs from land uses within the GPEIR Study Area. Anticipated development would generate a net increase of approximately 3.12 million vehicle miles per day. Implementation of General Plan goals, policies, and actions would contribute to reducing GHG emissions compared to a no-project buildout scenario. These policies and actions promote multi-modal and active transportation improvements support infill and mixed-use development and further support balanced development, which will help reduce vehicle miles traveled.

GPEIR Mitigation Measure GHG-1 requires the City to update its Climate Action Plan and consider incorporating specified GHG reduction measures that could apply to individual development projects. However, due to the magnitude of growth associated with the Stockton 2040 General Plan, it is anticipated that an increase in GHG emissions would remain substantial and were considered significant and unavoidable.

Project Site

The proposed project would be subject to the requirements of the City of Stockton Climate Action Plan (CAP), which sets a GHG emission reduction target of 10% below 2005 GHG emission levels by 2020. The CAP incorporates a Development Review Process through which development projects document the incorporation of measures that would produce a reduction from 2020 business-as-usual GHG emissions consistent with State objectives. The project would be subject to these requirements, including development Best Management Practices that would result in the required reduction in GHG emissions (City of Stockton 2014).

Environmental Impacts and Mitigation Measures

a) GHG Emissions.

Construction and operational GHG emissions generated by the project were estimated using the CalEEMod model (see Section 3.3.3, Air Quality). Results of the CalEEMod run are available in Appendix B of this Initial Study/Addendum. Under unmitigated conditions, the project would generate approximately 363 metric tons carbon dioxide equivalent (CO₂e) of GHGs for the entire construction period, while operational GHG emissions would be approximately 4,517 metric tons CO₂e annually.

CalEEMod also estimated annual operational GHG emissions accounting for incorporation of project features and regulatory requirements that would reduce GHG emissions. These include:

- Installation of sidewalk along currently unimproved frontage per City standards.
- Close access to public transit stops.
- Increased diversity of land uses in area.
- Proximity to downtown Stockton and job centers.
- Reduction of indoor and outdoor water use by 20% in accordance with SBX7-7 targets.
- Recycling and composting of 75% of waste in accordance with AB 939 targets.

With implementation of these features and requirements, GHG operational emissions from proposed development would be approximately 3,584 tons per year, a reduction of approximately 21% from unmitigated emissions.

It should be noted that the GPEIR used as one of its significance thresholds for GHG emission impacts a “bright line” threshold of 900 metric tons CO₂e per year for projects. The proposed development on the project site would exceed this threshold. However, exceeding the bright-line significance criteria does not necessarily indicate that the proposed project would generate a significant and unavoidable impact. Typically, based on how the bright-line threshold is applied in other air districts, the bright-line thresholds are utilized as a screening criterion to identify whether a full analysis of GHG emissions is warranted. This analysis has been done, consistent with the GPEIR. This development is consistent with the Stockton 2040 General Plan, so emissions generated by the proposed development would not alter the GHG analysis and conclusions in the GPEIR.

Moreover, under the City’s Climate Action Plan, approximately 83% of the reductions needed to achieve the City’s GHG reduction goal are achieved through state-level programs, and 17% are achieved through City-level programs. Based on these percentages, approximately 5% of GHG reductions would be required by local measures. Therefore, a project that can attain at least a 5% reduction in GHG emissions from business-as-usual levels would have impacts on GHG reduction plans that would be less than significant. The mitigated GHG operational emissions for the project are approximately 21% less than the unmitigated (or “business as usual”) GHG operational emissions. This reduction would be

consistent with the GHG reduction target for projects set forth in the Climate Action Plan. Project GHG emission impacts, therefore, are considered less than significant.

b) Conflict with GHG Reduction Plans, Policies, and Regulations.

The proposed project is consistent with the development anticipated in the General Plan, the land use map of which was used in estimating the vehicle miles traveled (VMT) generated by proposed future development. The VMT, in turn, was used to estimate GHG emissions from the transportation sector, which was the largest source of GHG emissions. The proposed development would not lead to a significant variation in anticipated GHG emissions to be generated under the General Plan. Therefore, project impacts related to GHG reduction plans would be less than significant.

3.3.8 HAZARDS AND HAZARDOUS MATERIALS

Environmental Issue Area	Conclusion in GPEIR	Does the project involve new impacts?	New circumstances involving new impacts?	New information requiring new analysis or verification?	Mitigation required?
a) Hazardous material transportation, use, and disposal	Less than significant	No	No	No	None required
b) Hazardous materials upset and accident conditions	Less than significant	No	No	No	None required
c) Release of hazardous materials near schools	Less than significant	No	No	No	None required
d) Hazardous materials sites	Less than significant	No	No	No	None required
e) Public/public-use airport hazards	Less than significant	No	No	No	None required
f) Private airstrip hazards	No impact	No	No	No	None required
g) Emergency response and emergency evacuation plans	Less than significant	No	No	No	None required
h) Wildland fire hazards	Less than significant	No	No	No	None required

Environmental Setting

GPEIR

As discussed in the GPEIR, construction and operation of new development allowed by Hammer Lane Annexation Initial Study/Addendum

the General Plan would involve the routine use and handling of hazardous materials (e.g., diesel gasoline and fertilizers) and could involve the use of petroleum-based fuels for maintenance and construction equipment. General Plan policies and actions would help reduce the risks associated with the transport, use, and disposal of hazardous materials. All new development will also be subject to existing federal, State, and local regulations related to hazmat transport, use, and disposal. These actions and regulations would reduce hazardous materials impacts to a less-than-significant level.

New development that involves the on-site use of hazardous materials, and generation of hazardous waste could increase the frequency of accidents involving hazardous releases. General Plan policies and actions as well as a range of federal, state, and local regulations govern these uses as well as agency response to release incidents. With implementation of proposed policies and actions and related federal and state programs, impacts would be less than significant.

The GPEIR indicated that development on and near contaminated sites could create a hazard to the public or the environment. New development must prepare hazardous materials or contamination inventories and identify any required cleanup measures. These and other related measures would result in a less-than-significant impact in this issue area.

New development pursuant to the General Plan has the potential to impact or physically interfere with an adopted emergency response plan or emergency evacuation plan. General Plan policies and actions include direction that new development provide adequate access for emergency vehicles and evacuation routes. Implementation of the relevant General Plan policies and actions would make potential impacts less than significant.

Project Site

Data on hazardous waste and hazardous material use and transportation sites are maintained in the State GeoTracker (State Water Resources Control Board) and EnviroStor databases (California Department of Toxic Substances Control). The EnviroStor database indicates no record of active hazardous material sites on or within one-half mile of the project site (DTSC 2019). The GeoTracker database indicates no record of active sites on the project site and only one site classified as active within one-half mile - a now-closed gas station at 6100 Highway 99 Frontage Road, east of and on the opposite side of SR 99 from the project site. The last record of remedial activity on this site was in 2013 (SWRCB 2019).

Environmental Impacts and Mitigation Measures

a) Hazardous Materials Transportation, Use, and Disposal.

In general, the proposed project would not involve the use of significant amounts of hazardous materials except for the proposed fueling station at the commercial center, which would store gasoline and diesel fuel in underground tanks. Fuel transportation would be subject to federal tank, placard, and shipment documentation and reporting requirements. Underground tank installation would be subject to the Underground Storage Tank program, implemented by the County Environmental Health Department. The project also would be required to submit a Hazardous Material Business Plan that addresses the on-site use and storage of fuels as well as plans for response to spills or upset conditions. With

implementation of these programs and regulations, project impacts related to the transportation, use and disposal of hazardous materials would be less than significant, consistent with the GPEIR findings in this issue area.

b) Hazardous Materials Upset and Accident Conditions.

As noted in a) above, the only activity on the project site using significant amounts of hazardous materials would be the fueling station. Transportation of fuels to the project site would involve potential for hazardous materials spills, but transport is subject to state and federal regulations designed to minimize the risk of release of hazardous materials into the environment. Also, proposed fuel dispensing equipment would be subject to SJVAPCD Rules 4621 and 4622 that require vapor recovery systems, among other requirements. This would limit releases of potentially hazardous vapors into the environment. With implementation of these programs and regulations, project impacts related to potential upsets and accidents would be less than significant, consistent with the GPEIR findings in this issue area.

c) Release of Hazardous Materials near Schools.

CEQA Guidelines Appendix G indicates that a project may have a potentially significant impact if it emits hazardous emissions or handles hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. An existing school is located on the project site, the "one.Ethics" Community School, which is an alternative school managed by the San Joaquin County Office of Education. However, this school would be moved and the existing building demolished prior to hotel project construction. After the move, the nearest school to the project site would be Cesar Chavez High School, approximately one-half mile to the southwest. As described in a) and b) above, the project is unlikely to release any hazardous materials but would involve no impact related to hazardous material emissions within one-quarter mile of schools.

d) Hazardous Materials Sites.

A search of the DTSC's EnviroStor and SWRCB's GeoTracker databases for the previous Hammer Petroleum project found no record of any hazardous material or contamination sites on or adjacent to the project site. Previous agricultural use on the project site may have left some agricultural chemical residues in the soil, but the project site has not been used for agriculture in recent years. General Plan Action SAF-2.6B requires new development to prepare a hazardous materials inventory and/or prepare Phase I or Phase II hazardous materials studies, including any required cleanup measures; with the implementation of this requirement project impacts related to hazardous material sites would be less than significant, consistent with the GPEIR findings in this issue area.

e) Public/Public-Use Airport Hazards.

The GPEIR identified potential hazards within safety zones around Stockton Metropolitan Airport. However, the airport is southeast of Stockton, and the project site is not within any of the airport safety zones. Consequently, the project would have no impact related to public/public-use airport hazards.

f) Private Airstrip Hazards.

The GPEIR stated that the GPEIR Study Area, which includes the project site, does not contain any private airstrips. Because of this, the project would have no impact related to airstrip hazards.

g) Emergency Response and Emergency Evacuation Plans.

Project construction work would mostly occur on the parcels. Work on adjacent roads would be limited to roadway frontage improvements and connection to utility lines, which is not expected to require closure or major restrictions on public use of the roads. Once construction work is completed, the project would not obstruct any roadways. Two driveways from Maranatha Drive, one driveway from SR 99 Frontage Road, and one driveway from Hammer Lane would provide access to and from the site for emergency vehicles. Project impacts on emergency vehicle access or emergency evacuation plans would be less than significant, consistent with the GPEIR findings in this issue area.

h) Wildland Fire Hazards.

The GPEIR noted that the General Plan would have a significant environmental impact if it would locate people or structures in a High or Very High Fire Hazard Safety Zone, as defined by Cal Fire. The GPEIR Study Area, including the proposed project site, is not located in such zones. The project site is in an urbanizing area, so wildfires are unlikely to occur. The project would have no impact related to wildland fire hazards.

3.3.9 HYDROLOGY AND WATER QUALITY

Environmental Issue Area	Conclusion in GPEIR	Does the project involve new impacts?	New circumstances involving new impacts?	New information requiring new analysis or verification?	Mitigation required?
a) Water quality standards and discharge requirements	Less than significant	No	No	No	None required GPEIR Mitigation Measure HYDRO-5
b) Groundwater supplies	Less than significant	No	No	No	None required
c) Groundwater recharge	Less than significant	No	No	No	None required
d) Change in	Less than	No	No	No	None required

drainage patterns causing erosion	significant				
e) Change in drainage patterns causing flooding	Less than significant	No	No	No	None required
f) Stormwater drain infrastructure	Less than significant with mitigation	No	No	No	GPEIR Mitigation Measure HYDRO-5
g) Degradation of water quality	Less than significant	No	No	No	None required
h) Housing within 100-year flood hazard area	Less than significant	No	No	No	None required
i) Change of flood flows within 100-year flood hazard area	Less than significant	No	No	No	None required
j) Flooding from dam or levee failure	Less than significant	No	No	No	None required
k) Seiche, tsunami, and mudflow hazards	Less than significant	No	No	No	None required

Environmental Setting

GPEIR

The GPEIR describes the potential water-related effects of construction and development activities as well as effects associated with operations of new urban uses. The City of Stockton has adopted a Storm Water Management Plan and a Stormwater Quality Control Criteria Plan that set the requirements and procedures to be followed for new development projects to minimize water quality impacts of runoff. These include conformance with the State Construction General Permit, which requires development to prepare and follow a plan to control erosion and sedimentation from construction sites. The Stockton Municipal Code establishes limitations on the amount and quality of discharges into the City's stormwater system. The General Plan includes additional policies and actions that would further minimize potential water quality impacts. Together, these regulations, plans and actions would result in a less-than-significant water quality impact.

According to the GPEIR, available groundwater supplies are forecast to increase, and groundwater as a proportion of total urban water supplies is forecast to decrease. Previous and ongoing City water supply planning efforts, including efforts dictated by General Plan policies and actions, and overall City water conservation and efficiency requirements documented in the General Plan, led the GPEIR to conclude that new development pursuant to the General Plan would have a less-than-significant impact on groundwater supplies.

New development would increase the total amount of impervious areas in the GPEIR Study

Area, which could reduce the area's capacity for groundwater recharge. However, under the General Plan, priority projects would be required to implement multiple Best Management Practices that minimize impervious areas and retain, reuse, and/or infiltrate stormwater. General Plan Action SAF-3.2.B requires new development to employ Low Impact Development approaches that also reduce impervious area. The GPEIR considered groundwater recharge impacts after implementation of these measures to be less than significant.

The GPEIR noted that development allowed under the General Plan could convert existing undeveloped lands to urban uses, which would alter the existing drainage pattern, causing an increase in the peak flows and volumes discharged from the developed land during storm events. This, in turn, could result in substantial erosion or siltation downstream if discharged directly to downstream receiving waters. Storm drainage and runoff impacts could be significant without mitigation. However, Mitigation Measure HYDRO-5 in the GPEIR would require new development to complete project-related stormwater plans covering drainage, flood control, and storm water quality/permitting, among other matters. Implementation of this mitigation measure would reduce potential impacts to a level that would be less than significant.

Project Site

There are no streams or other surface waters on or adjacent to the project site. The nearest stream is the Calaveras River, located more than one mile south of the project site. Because of the relatively flat topography of the area and historical agricultural activities, drainage patterns in the area have been extensively modified over time. Remaining streams in the Stockton area have been largely modified and are confined within levee systems. Minor drainage features have been largely eliminated or replaced by man-made surface and underground drainage systems.

The project site is within the Eastern San Joaquin County groundwater subbasin. Groundwater in the project vicinity generally follows the surface topography, gradually sloping from east to west. Groundwater levels at the project site are more than 50 feet below the ground surface. Groundwater levels can be influenced by subsurface groundwater flow from areas of higher elevation to the east and by local irrigation practices.

According to the Flood Insurance Rate Maps prepared by the Federal Emergency Management Agency (FEMA), the project site lies within an area classified as Zone X. Zone X denotes areas outside the 100-year floodplain, but within the 500-year floodplain (FEMA 2009). Based on information provided by San Joaquin County, the project site would not be subject to a 200-year flood at a depth of 3 feet or greater (San Joaquin County 2020), which is the Central Valley urban standard for flood protection under SB 5 and companion bills.

Environmental Impacts and Mitigation Measures

a) Water Quality Standards and Discharge Requirements.

Development under the proposed project would be required to obtain a Construction General Permit and to conform to the Stockton Storm Water Master Plan, the Storm Water Quality Control Criteria Plan, and other City requirements related to storm water quality. As a result, project impacts related to water quality standards would be less than significant, consistent with the GPEIR findings in this issue area.

b) Groundwater Supplies.

The project site would connect to the City's water supply system and not result in any direct demand on groundwater supplies. Water supply for the site would be obtained from the overall City water supply composed of surface and groundwater sources. The project would have no direct or significant impact on groundwater supplies, consistent with the GPEIR findings in this issue area.

c) Groundwater Recharge.

The proposed project would increase the impervious surface area on the site. However, the project would comply with City requirements regarding storm water, including Low Impact Development approaches and applicable Best Management Practices, consistent with the requirements of the General Plan and GPEIR. Project impacts on groundwater recharge would be less than significant.

d) Change in Drainage Patterns Causing Erosion.

The project site is currently undeveloped and generally flat. There is no indication of any defined drainage patterns on the site. Proposed development of the project site would alter existing storm drainage patterns, due to grading and the installation of pavement and storm drainage facilities. Actions described in a) and c) above would reduce potential impacts related to this issue to a less-than-significant level. As noted, the project would comply with all these measures; therefore, project impacts would be less than significant.

e) Change in Drainage Patterns Causing Flooding.

Installation of impervious surfaces would likely increase runoff, thereby increasing the potential for localized flooding. However, General Plan policies and actions addressing flooding, as well as the installation of a storm drainage system, would reduce impacts to a level that would be less than significant. Proposed improvements on the project site would result in the generation of new stormwater runoff due to the introduction of impervious surfaces such as buildings and parking areas. The project would comply with all these measures and actions; therefore, project impacts would be less than significant.

f) Stormwater Drain Infrastructure.

The project would submit plans for utility installation and connection, including storm drainage facilities, in accordance with City standards. This would be consistent with the requirements of GPEIR Mitigation Measure HYDRO-5. Because of this, project impacts on storm water infrastructure would be less than significant.

g) Degradation of Water Quality.

As described above, the GPEIR stated that construction and operation of development allowed by the General Plan could degrade water quality. However, various actions and regulations described above would reduce water quality impacts to a level that would be less than significant. The project would not affect water quality other than as described above; therefore, its impacts would be less than significant, consistent with the GPEIR findings in this issue area.

h) Housing within 100-Year Flood Hazard Area.

The project site does not propose housing and is not within a 100-year floodplain. Therefore, it would have no impact in this issue area.

i) Change of Flood Flows within 100-Year Flood Hazard Area.

As noted, the project site is not within a 100-year floodplain and would therefore have no effect on flood flows within a 100-year flood hazard area. Therefore, it would have no impact on this issue.

j) Flooding from Dam or Levee Failure.

The project site is not near any levees, so it would not be subject to flooding from levee failure. The project site is potentially subject to inundation from failure of Camanche Dam, the south dikes of Camanche Reservoir, Pardee Dam, and Salt Springs Dam. As discussed in the GPEIR, considering the efforts by multiple agencies to maintain the structural and operational safety of the dams, the likelihood of a dam failure resulting in floodwaters affecting the project site is considered small. Project impacts related to flooding from dam or levee failure would be less than significant, consistent with the GPEIR findings in this issue area.

k) Seiche, Tsunami and Mudflow Hazards.

The project site is not in an area that would experience seiche, tsunami, or mudflow hazards; therefore, no impact in this issue area would occur.

3.3.10 LAND USE AND PLANNING

Environmental Issue Area	Conclusion in GPEIR	Does the project involve new impacts?	New circumstances involving new impacts?	New information requiring new analysis or verification?	Mitigation required?
a) Division of established community	Less than significant	No	No	No	None required

b) Conflict with plans, policies, and regulations adopted to avoid or mitigate environmental effect	Less than significant	No	No	No	None required
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Environmental Setting

GPEIR

The GPEIR compared consistency of the General Plan with local and regional plans and planning regulations adopted for the purpose of avoiding or mitigating environmental impacts in the GPEIR Study Area. These plans included the San Joaquin County General Plan, the Stockton Metropolitan Airport Land Use Compatibility Plan, the Regional Smart Growth Transit-Oriented Development Plan, the RTP/SCS, the San Joaquin County Regional Blueprint, and the Delta Plan. The various provisions of the General Plan, and the adopted land use designations, including the Commercial designation of the project site, were determined not to conflict with these land use plans. The land use and planning impacts of implementing the General Plan were determined to be less than significant.

Project Site

The project site is in unincorporated San Joaquin County, adjacent to the northeastern limits of the City of Stockton. The western portion of the site has been in orchard use but is now vacant. The eastern portion of the site contains vacant land, a church and a school; a single-family residence was recently demolished.

Land uses adjacent to the project site include vacant land and commercial orchards to the south, a residential subdivision and undeveloped land to the north, and a residence, gasoline station and SR 99 to the east. There is currently undeveloped land to the west across Maranatha Drive, but this site was recently approved by the City for development as an automobile dealership (CarMax). Most of the Hammer Lane frontage west of the site and east of Pacific Avenue has been developed for commercial use, including a range of shopping centers and several automobile dealerships.

The San Joaquin County General Plan designates the project site as Low Density Residential, and the site is currently zoned by the County as AU-20, Agriculture-Urban Reserve, 20-acre minimum. The Agriculture-Urban Reserve zone is applied to areas planned for future urban development but retained in agricultural use to facilitate compact, orderly urban development and to assure the proper timing and economical provision of services and utilities.

The City of Stockton has included the project site in its Planning Area for both the recently adopted Stockton 2040 General Plan and the foregoing 2007 General Plan. In both cases, the project site is designated Commercial.

Environmental Impacts and Mitigation Measures

a) Division of Established Community.

The nearest land use to the project site that could constitute a community is the residential subdivision north of the project site. The subdivision is already divided from the project site by the major arterial street, Hammer Lane. The project would not encroach upon the subdivision or substantially alter Hammer Lane. Other land uses in the vicinity have either existing or proposed commercial or other development. Outside of the subdivision, there is little in the character of an organized community in the vicinity. The project would have no impact related to division of communities.

b) Conflict with Plans, Policies, and Regulations Adopted to Avoid or Mitigate Environmental Effect.

The proposed project would be consistent with the adopted General Plan. Other adopted land use plans, such as the Delta Plan and the Airport Land Use Compatibility Plan, are not directly applicable to the project or the project site due to its location outside their defined planning areas. Implementation of applicable General Plan policies and actions would ensure that the project is consistent with other applicable plans. Project impacts related to this issue would be less than significant, consistent with the GPEIR findings in this issue area.

3.3.11 NOISE

Environmental Issue Area	Conclusion in GPEIR	Does the project involve new impacts?	New circumstances involving new impacts?	New information requiring new analysis or verification?	Mitigation required?
a) Exposure to or generation of noise exceeding local standards	Less than significant	No	No	No	None required
b) Groundborne vibration and noise	Less than significant	No	No	No	None required
c) Permanent increase in ambient noise levels	Significant and unavoidable	No	No	No	None required
d) Temporary or periodic increase in ambient noise levels	Less than significant	No	No	No	None required
e) Exposure to noise from public/public-use airports	Less than significant	No	No	No	None required
f) Exposure to noise from private	Less than significant	No	No	No	None required

airstrips					
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Environmental Setting

GPEIR

Future development under the General Plan would create new stationary and mobile noise sources or expand existing sources with potential to impact adjacent or nearby sensitive receptors. New development would also include development of new noise-sensitive land uses in the vicinity of noise sources, exposing them to potential noise impacts. The General Plan contains goals, policies, and actions that would prevent or mitigate substantial permanent long-term increases in noise from new development and transportation-related sources. The General Plan, in combination with the requirements of the City's Noise Control Ordinance, would avoid substantial permanent increases in overall community noise and have less than significant impacts in this issue area.

The General Plan establishes significance thresholds for noise. A project will have a significant impact if it results in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, under the following conditions:

- A 5-dBA increase, if after the increase, the ambient noise level remains in the range of what would be "normally acceptable" at the land use where the noise is being received; or
- A 3-dBA increase, if after the increase, the ambient noise level exceeds the range of what would be "normally acceptable" at the land use where the noise is being received.

Through enforcement of applicable General Plan goals, policies, and actions, along with the requirements of the City's Noise Control Ordinance, impacts of stationary source noise from long-term operations would be less than significant. However, potential noise increases from long-term traffic growth were considered significant and unavoidable, even with traffic mitigation measures identified in the GPEIR.

The GPEIR also considered short-term construction-related noise from new development as significant. Construction equipment can generate high levels of noise, with typical equipment often generating noise levels ranging from 71 dBA to 101 dBA at 50 feet. Construction of individual projects allowed under the General Plan would temporarily increase the ambient noise environment and would have the potential to affect noise-sensitive land uses in the vicinity. Municipal Code Chapter 16.60 establishes City standards and requires acoustical analysis and noise attenuation/mitigation measures in conjunction with new development that would involve noise impacts. Impacts from temporary or periodic increases to ambient noise levels would be reduced to a less-than-significant level.

The GPEIR also considered potential annoyance or architectural damage from vibration in localized areas. For the construction phase of future development, the Planning Department must require that the project use the best available technology to minimize

excessive vibration from construction equipment so that construction-related vibrations are reduced below applicable Stockton Municipal Code and Federal Transit Administration guidelines for both annoyance and architectural damage.

Also, Section 16.32.100 of the Stockton Municipal Code includes qualitative limits for vibration levels within the city. Uses that generate vibration must not generate ground vibration that is perceptible without instruments by the average person at any point along or beyond the property line of the parcel containing the activities. Vibrations from temporary construction, demolition, and vehicles that leave the subject parcel are exempt from the provisions of this section. These existing requirements would ensure that development allowed under the General Plan would not result in perception of excessive noise and vibration by sensitive receptors. Impacts would be less than significant.

Project Site

The primary noise source at the project site is traffic on Hammer Lane. There are no railroads, airports, or industrial uses in the vicinity of the project. According to the GPEIR, traffic noise levels along the project site segment of Hammer Lane were estimated to reach 70 dB within 99 feet of the Hammer Lane centerline, 65 dB within 213 feet of the centerline and 60 dB within 458 feet of the centerline (City of Stockton 2018).

Traffic on SR 99 east of the project site is another potential noise source. The San Joaquin County General Plan Background Report indicated that traffic noise levels along SR 99 at the Hammer Lane interchange reached 70 dB within 338 feet of the SR 99 centerline, 65 dB within 729 feet of the centerline and 60 dB within 1,570 feet of the centerline (San Joaquin County 2016). Much of the project site is within the 60-dB noise contour of SR 99, but the site is not within any higher-decibel contours. While SR 99 noise contributes to ambient noise levels at the site, these contributions are secondary to the more proximate Hammer Lane noise. There are no other significant noise sources near the project site.

Environmental Impacts and Mitigation Measures

a) Exposure to or Generation of Noise Exceeding Local Standards.

The Stockton Municipal Code (Section 16.60.050) requires the preparation of an acoustical study in instances where a project has the potential to affect sensitive noise receptors. For this project, potential sensitive receptors are residences in the residential subdivision across Hammer Lane, north of the project site. Potential noise impacts associated with the project were evaluated in an Environmental Noise Assessment conducted by j.c. brennan and associates, available in Appendix D of this Addendum (j.c. brennan 2020).

The noise assessment evaluated the existing ambient noise environment on and near the project site, including nearby residential areas, along with existing traffic noise levels on Hammer Lane and Maranatha Drive. It then compared anticipated ambient and traffic noise levels associated with proposed development on the project site with these existing noise conditions. The Stockton 2040 General Plan states that, if existing noise standards are currently exceeded, a proposed project shall not incrementally increase noise levels by more than 3 dBA. Existing noise conditions in nearby residential areas exceed the City's 60 dBA noise standard established in the General Plan. Existing noise on the hotel site exceeds the City 65 dBA standard for associated outdoor use areas.

Traffic Noise Impacts

Traffic noise generated by the proposed project was estimated using data from the project traffic analysis (see Section 3.3.14, Transportation and Appendix E of this Initial Study/Addendum). Under the Existing Plus Approved Projects Plus Project scenario evaluated in the traffic analysis, the project would result in increases in traffic noise levels between 0 dB and 1 dB $L_{dn}/CNEL$, which is substantially below the 3 dB significance threshold defined in the General Plan. On this basis, the project would have a less than significant traffic noise effect.

Convenience Store and Fueling Station Noise Impacts

The proposed AMPM convenience store and fueling facility would generate noise associated with vehicles arriving or departing, car doors slamming, and people talking. Assuming a typical source-receptor distance, measured from the entrance to the project site to the nearest residences to the north (approximately 200 feet), and assuming 236 peak hour trips occurring in the north portion of the site, j. c. brennan predicted peak hour noise level from the commercial center site at the nearby residential area at 45 dBA L_{eq} , which complies with the Stockton Municipal Code exterior noise level standards of 55 dBA L_{eq} during the daytime period and 45 dBA L_{eq} during nighttime without accounting for intervening noise barriers. The predicted noise levels are significantly less than the measured background noise levels. This is consistent with the findings of the GPEIR.

Fast-Food Restaurant Drive-Thru Lane Noise Impacts

The proposed Sonic restaurant includes a drive-thru lane. To quantify the noise emissions from the proposed drive-thru, data from a Sacramento-area drive-thru restaurant was used. The drive-thru speaker apparatus used at the test site is typical of most drive-thru speakers. Based upon the measured noise levels and assuming 55 peak hour trips, the L_{eq} would be 54 dBA at a distance of 30 feet. The nearest residential property line is located approximately 420 feet to the north from the drive-thru speaker. At this distance, drive-thru noise levels are predicted to be 31 dB L_{eq} , substantially below the applicable Stockton noise standard; noise impacts from this source would be less than significant, consistent with the GPEIR findings in this issue area. The drive-thru analysis does not account for any shielding from the intervening building facades, which would further reduce noise received at the residential area.

Car Wash Noise Impacts

The proposed car wash would operate during the daytime hours and cease operations at 9:00 p.m. The nearest residences are located 750 feet to the north. Based upon manufacturer data provided by the project applicant, the car wash will result in a noise level of 70 dBA L_{eq} at 70 feet from the tunnel exit, which is the noisiest portion of the car

wash. From this result, the predicted noise level at the nearest residences to the north is 50 dBA L_{eq} . The predicted noise levels comply with the Stockton Municipal Code exterior noise level standard of 55 dB L_{eq} “daytime” (7:00 AM – 10:00 PM) noise level standard and would be significantly less than the measured background noise levels. No nighttime noise would be generated by the car wash.

Hotel Noise Impacts

The proposed hotel will be required to achieve an exterior noise level standard of 65 dB $L_{dn}/CNEL$, applied in the outdoor areas, such as the proposed pool. The project will also be required to achieve an interior noise level standard of 45 dB $L_{dn}/CNEL$. The exterior noise environment adjacent to the proposed hotel is dominated by traffic on Hammer Lane and SR 99. While a recent CEQA court case has indicated that impacts of the local environment on a project are not the subject of CEQA discussion, such impacts are analyzed here as it would affect hotel visitors.

The measured background noise levels due to traffic at the site indicates that the overall existing noise environment is approximately 70 dB $L_{dn}/CNEL$. Future traffic noise levels could increase by up to +1 dB, based upon projected increases in traffic volumes. For this analysis, it is assumed that the first floor will be exposed to traffic noise levels of approximately 71 dB $L_{dn}/CNEL$. Upper floors would be expected to be exposed to traffic noise levels of 3 dB higher due to lack of ground absorption and clearer line of sight to SR 99. Therefore, the second through fourth floors are assumed to be exposed to traffic noise levels up to 74 dB $L_{dn}/CNEL$.

The proposed pool area for the hotel is located approximately 320 feet from Hammer Lane and 900 feet from SR 99. There is significant shielding of traffic noise at the pool area by the hotel building. The predicted noise level due to traffic is less than 61 dB $L_{dn}/CNEL$, which would comply with the exterior noise level standard of 65 dB $L_{dn}/CNEL$.

The noise assessment estimated interior noise levels within the hotel, using data on building construction. The estimated interior noise levels range from 43 dB L_{dn} on the first floor to 45 dB L_{dn} on the second to fourth floors. Based on these results, project impacts related to hotel noise would be less than significant, although the noise assessment made the following recommendations:

- First floor units will require windows with an STC rating of 30.
- Second through fourth floor units will require windows with an STC rating of 34.
- All units will require interior gypsum board to be applied to resilient channels on walls parallel to Hammer Lane. This includes both the north-facing and south-facing facades.

The proposed project complies with Municipal Code standards through preparation of the project acoustical study included in Appendix D. The acoustical study finds that the project’s noise impacts on sensitive receptors, mainly residences and hotel guests, would be less than significant, consistent with the GPEIR findings in this issue area.

b) Groundborne Vibrations and Noise.

An analysis of the previous Hammer Lane project, using methodology prescribed by Caltrans, determined that the maximum ground vibration produced by a large bulldozer at the eastern portion of the commercial center site would produce a peak particle velocity of 0.089 inches per second (in/sec) at the existing school. The estimated peak particle velocity is above the "Barely Perceptible" threshold of 0.04 in/sec but below the "Distinctly Perceptible" threshold of 0.25 in/sec. Moreover, bulldozer work would be temporary and would cease once grading work is completed. Project development would not generate noticeable vibrations resulting from its operations, and impacts related to groundborne vibrations would be less than significant, consistent with the GPEIR findings in this issue area.

c) Permanent Increase in Ambient Noise Levels.

As described in a) above, the proposed development would result in a permanent increase in ambient noise levels over existing conditions, as the site is currently vacant. However, as determined by the noise assessment, noise increases associated with the proposed development would not exceed 3 dBA. In some cases, predicted noise levels are significantly less than the measured background noise levels. Impacts on permanent noise levels from noise generated on the site are considered less than significant, consistent with the GPEIR findings in this issue area.

d) Temporary or Periodic Increase in Ambient Noise Levels.

Project construction would involve temporary increases in ambient noise levels, due to the use of construction equipment and vehicle traffic to and from the construction site. Activities involved in construction would potentially use equipment that would generate maximum noise levels ranging from 76 to 90 dB at 50 feet, as shown in Table 3-2, consistent with the analysis of construction noise included in the GPEIR.

TABLE 3-2
CONSTRUCTION EQUIPMENT NOISE LEVELS

Type of Equipment	Predicted Noise Levels (L _{max} dB)				Distance to Noise Contour (feet)	
	50 ft	100 ft	200 ft	400 ft	70 dB L _{max}	65 dB L _{max}
Backhoe	78	72	66	60	126	223
Compactor	83	77	71	65	223	397
Compressor (air)	78	72	66	60	126	223
Concrete Saw	90	84	78	72	500	889
Dozer	82	76	70	64	199	354
Dump Truck	76	70	64	58	100	177

Excavator	81	75	69	63	177	315
Generator	81	75	69	63	177	315
Jackhammer	89	83	77	71	446	792
Pneumatic Tools	85	79	73	67	281	500

Source: j.c. brennan and associates 2020.

Construction activities would be temporary in nature and are anticipated to occur during normal daytime working hours. Project construction noise would cease once construction work is completed. The existing land uses most sensitive to noise – the church, school, and residential area to the north - would be demolished prior to start of project construction work. However, Municipal Code requirements prohibits construction noise from disturbing adjacent residential parcels between 10:00 p.m. to 7:00 a.m., thereby avoiding noise at nighttime, which is considered the most noise-sensitive time for residences. Project impacts related to construction noise are therefore considered less than significant, consistent with the GPEIR findings in this issue area, although the noise assessment recommends the following:

- All construction equipment shall be fitted with factory-equipped mufflers and be in good working order.
- The City shall limit construction activities to the hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday, with no construction on Sundays or national holidays without a written permit from the City.

It is expected that these recommendations would be incorporated as conditions of approval for the project. These recommendations would further reduce construction noise impacts on noise-sensitive land uses.

e) Exposure to Noise from Public/Public-Use Airports.

As noted in the Hazards section, Stockton Metropolitan Airport is approximately eight miles south of the project site. The proposed project site is not within any of the noise contours established in the Airport Land Use Compatibility Plan. Consequently, the project would have no impact related to public/public-use airport noise exposure.

f) Exposure to Noise from Private Airstrips.

As noted in the Hazards section, the GPEIR Study Area does not contain any private airstrips. However, the GPEIR noted that there are two heliports: the A.G. Spanos Companies HQ Heliport in the northwest corner of the Study Area, and the San Joaquin General Hospital Heliport in its southern part. Neither heliport is in the vicinity of the project site. Because of this, the project would have no impact related to airstrip noise exposure.

3.3.12 POPULATION AND HOUSING

Environmental Issue Area	Conclusion in GPEIR	Does the project involve new impacts?	New circumstances involving new impacts?	New information requiring new analysis or verification?	Mitigation required?
a) Population growth inducement	Significant and unavoidable	No	No	No	None required
b) Displacement of housing units	Less than significant	No	No	No	None required
c) Displacement of people	Less than significant	No	No	No	None required

Environmental Setting

GPEIR

The General Plan and GPEIR account for anticipated residential development and population growth through 2040. The General Plan projections fall within the San Joaquin County Council of Government's (SJCOG) projections for housing and population growth. On the other hand, the proposed General Plan anticipates more job growth by 2040 than the SJCOG projections. The General Plan calls for orderly and planned growth, and projected residential growth is not substantial given regional projections. However, the projected employment growth under the proposed General Plan was considered significant and unavoidable, as this growth would significantly exceed SJCOG's employment projections and there is no feasible mitigation for this impact.

Development under the General Plan would displace some existing housing units; however, other units would be constructed. The net result would be an increase in housing stock; therefore, impacts related to displacement were considered less than significant.

As of January 1, 2020, the population of San Joaquin County was estimated at 773,632, an increase of 12.9% from its 2010 population of 685,306 as recorded by the U.S. Census Bureau. The population of Stockton was estimated at 318,522, an increase of 9.2% from its 2010 population of 291,707 (California Department of Finance 2020).

Project Site

The commercial site is vacant; the hotel site contains a small church and school. There is presently no population or housing on the project site. A single-family residence had been recorded on the project site, but this residence was removed (see Section 3.3.5, Cultural Resources).

Environmental Impacts and Mitigation Measures

a) Population Growth Inducement.

The project is consistent with the existing General Plan land use designations for the site. Therefore, proposed development of the site would be consistent with the General Plan growth projections; no unplanned population or employment growth would be associated with the proposed project. Project impacts on population and employment growth would be less than significant, consistent with the GPEIR findings in this issue area.

b) Displacement of Housing Units.

The project would not displace any housing units. The project would have no impact regarding displacement of housing units.

c) Displacement of People.

As discussed in b) above, the project would not displace any housing units; as such, it would not displace any people and would have no impact regarding displacement of people.

3.3.13 PUBLIC SERVICES AND RECREATION

Environmental Issue Area	Conclusion in GPEIR	Does the project involve new impacts?	New circumstances involving new impacts?	New information requiring new analysis or verification?	Mitigation required?
a) New or expanded fire protection facilities	Less than significant	No	No	No	None required
b) New or expanded police protection facilities	Less than significant	No	No	No	None required
c) New or expanded park facilities	Less than significant	No	No	No	None required
d) Increased use of parks and recreational facilities	Less than significant	No	No	No	None required
e) New or expanded recreational facilities	Less than significant	No	No	No	None required
f) New or expanded school facilities	Less than significant	No	No	No	None required
g) New or expanded library facilities	Less than significant	No	No	No	None required

Environmental Setting

GPEIR

Projected growth under the General Plan would result in needs for additional fire and police facilities, staffing, and equipment to maintain or improve current response times. General Plan actions would support expansion of police, fire protection, and emergency medical response services needed to serve existing and new development. The Stockton Municipal Code has established Public Facilities Fees on the issuance of permits for new development that provides a funding mechanism for construction of City offices, fire stations, libraries, police stations, community recreation centers, street improvements, and water and sewage facilities. Stockton voters approved Measure W in 2004, which provides additional funding for fire and police services through a sales tax increase. While the GPEIR addresses fire protection issues on a programmatic level, it considers fire and police protection impacts to be less than significant.

New population resulting from development under the General Plan would increase demand for parks and recreational facilities in accordance with adopted service standards. The General Plan identifies potential locations of future park facilities, and it includes policies and actions that support the provision of park land and facilities; Public Facilities Fees applicable to new development would provide a funding source for park acquisition and development. The GPEIR addresses park and recreational facility issues on a programmatic level, finding park and recreational facility impacts to be less than significant.

The GPEIR Study Area is currently served by five school districts. New housing in each school district would result in an increased student population, which could result in the need for new or expanded school facilities. Additional funding for school improvement projects in all the districts comes from payment of adopted developer impact fees, which are deemed to fully mitigate the impacts of new development on school facilities, per California Government Code Section 65996. On this basis, overall new development impacts related to school facilities were considered less than significant.

Similarly, future development would increase demand for and utilization of library facilities. General Plan policies and actions, and Public Facility Fees for libraries, would ensure that adequate library services and facilities are available to meet increasing demand. The GPEIR addresses library facility issues on a programmatic level, finding library facility impacts to be less than significant.

Project Site

Currently, fire protection service to the project site is provided by the Waterloo-Morada Fire District, and police protection service is provided by the San Joaquin County Sheriff's Department. Upon annexation, the site would receive fire protection service from the Stockton Fire Department and police protection service from the Stockton Police Department. The project site is currently within the boundaries of the Stockton Unified School District and would remain so upon annexation. The project site currently has access

to the combined City/County library system and to public parks and recreational facilities managed by the City and the County, and it would continue to do so upon annexation. There are no fire, police, park, or library facilities in the immediate vicinity of the project. As noted in Section 3.3.8, Hazards and Hazardous Materials, the “one. Ethics” Community School, an alternative school managed by the San Joaquin County Office of Education, is located on the hotel portion of the project site. Cesar Chavez High School is located approximately 0.5 air miles southwest of the site on Holman Road.

Environmental Impacts and Mitigation Measures

a) New or Expanded Fire Protection Facilities.

The project would generate additional demand for Stockton Fire Department services. The closest Fire Department station to the project site is Station 13, located at 3606 Hendrix Drive, approximately 1.8 miles north. Commercial development can be served by the Stockton Fire Department without new or expanded facilities. Additionally, the project will be required to contribute Public Facility Fees to future construction of Fire Department facilities required by urban expansion. Project impacts on fire protection facilities would be less than significant, consistent with the GPEIR findings in this issue area.

b) New or Expanded Police Protection Facilities.

The project would generate additional demand for Stockton Police Department services. Commercial development can be served by the Stockton Police Department without new or expanded facilities. Additionally, the project will be required to contribute Public Facility Fees to future construction of Police Department facilities required by urban expansion. Project impacts on police protection facilities would be less than significant, consistent with the GPEIR findings in this issue area.

c) New or Expanded Parks.

The project would not involve any direct effects on City parks. Since the proposed project is commercial and does not propose residences, it would not generate a demand for new or expanded parks. The project would have no impacts on parks.

d) Increased Use of Parks and Recreational Facilities.

As noted in c) above, the project would not involve any direct effects on City parks. Similarly, it would not generate an increase in demand for or use of parks or recreational facilities. The project would have no impacts on demand for parks or recreational facilities.

e) New or Expanded Recreational Facilities.

Since the proposed project is commercial and does not propose residences, it would not generate a demand for new or expanded recreational facilities. The project would have no impacts on recreational facilities.

f) New or Expanded School Facilities.

The project involves commercial development, which does not directly generate new

student load. Nevertheless, the developer would be required to pay development impact fees to the Stockton Unified School District toward the construction of new schools. As noted above, the payment of impact fees is considered adequate mitigation for CEQA purposes. Project impacts on schools would be less than significant, consistent with the GPEIR findings in this issue area.

g) New or Expanded Library Facilities.

Since the proposed project is commercial, does not propose residences, and would not result in new population growth, it would not generate a substantial demand for new or expanded library facilities. The project would have no impact on library facilities.

3.3.14 TRANSPORTATION AND TRAFFIC

Environmental Issue Area	Conclusion in GPEIR	Does the project involve new impacts?	New circumstances involving new impacts?	New information requiring new analysis or verification?	Mitigation required?
a) Vehicle traffic on local roadways and freeway segments	Significant and unavoidable even with mitigation	No	No	No	None required
b) Vehicle traffic on regional roadways and freeway segments	Significant and unavoidable even with mitigation	No	No	No	None required
c) Air traffic patterns	Less than significant	No	No	No	None required
d) Hazards due to design feature or incompatible uses	Less than significant	No	No	No	None required
e) Adequate emergency vehicle access	Less than significant	No	No	No	None required
f) Conflict with policies, plans, and programs regarding public transit, bicycle, or pedestrian facilities	Less than significant	No	No	No	None required

Environmental Setting

GPEIR

New development pursuant to the General Plan would result in significant traffic impacts to roadway and freeway segments in Stockton as measured in Levels of Service (LOS).

One of these segments is in the vicinity of the proposed project site,

SR 99 between Fremont Street and Hammer Lane, which is projected to operate at LOS F under cumulative conditions with the General Plan. While the GPEIR described mitigation measures to reduce impacts on the identified segments, none were described for the segment of SR 99 between Fremont Street and Hammer Lane. Hammer Lane west of SR 99 is constructed to its ultimate planned width. The GPEIR did not identify significant traffic impacts along Hammer Lane. Even with implementation of mitigation measures, however, the overall traffic impacts of General Plan implementation were considered significant and unavoidable. [Note: after certification of the GPEIR, State law went into effect that prohibits the use of LOS in determining the significance of the environmental impacts of a project on transportation.]

The General Plan would result in significant LOS impacts on other roadway and freeway segments serving the San Joaquin County region. While the GPEIR described feasible mitigation measures to reduce impacts on the identified segments, some of the traffic impacts of GPEIR implementation were considered significant and unavoidable even with mitigation.

The GPEIR identified several transportation plans relevant to General Plan implementation, including the SJCOG Regional Transportation Plan/Sustainable Communities Strategy, the San Joaquin Regional Transit District Short Range Transit Plan, and the Stockton Bicycle Master Plan. The General Plan identifies policies and actions that would build upon these adopted plans and ensure that adequate public transit, bicycle, and pedestrian facilities are provided within Stockton. Implementation of the General Plan measures would not conflict with adopted plans, programs, and policies regarding bicycle or pedestrian facilities, or decrease the performance and safety of such facilities. Therefore, the GPEIR found that impacts on these transportation modes would be less than significant.

Because the General Plan is a program-level planning effort, it does not directly address project-level effects on issues such as air traffic patterns, design features, and emergency access. However, the General Plan policies address these concerns and would reduce these concerns to a level that would be less than significant.

Project Site

A Traffic Impact Analysis (TIA) of the project, available in Appendix E of this Initial Study/Addendum, evaluated the potential impacts on local roadways of the proposed development on local roadways. The methodology used in preparing the report consisted of estimating LOS at intersections and roadway segments, both without and with the proposed development, and assessing impacts in accordance with the City of Stockton TIA Guidelines. Impacts were analyzed at nine intersections, including five proposed driveways that would allow access to the proposed development, and on three roadway segments: Hammer Lane between Holman Road and Maranatha Drive, Hammer Lane between Maranatha Drive and the SR 99 Southbound Ramps, and Maranatha Drive south of Hammer Lane. Figure 5 of the traffic report (see Appendix E), illustrates the location of the intersections analyzed in the report.

The report evaluated LOS at the intersections and roadway segments near and adjacent to the project under Existing conditions and Existing Plus Approved Projects baseline conditions (i.e., including projects previously approved or under construction in the area),

the latter both without and with development on the project site. Under Existing conditions, all existing intersections and roadway segments analyzed in the report operate at an acceptable LOS. The same is true under Existing Plus Approved Projects conditions without development.

SJRTD fixed-route buses in the vicinity of the project site include Routes 340, 345, 360, 371, 375, and 535, along with Metro Express Route 43 and Metro Hopper Routes 6 and 8. A Class II bike lane extends along Hammer Lane from Maranatha Drive to the SR 99 interchange, and a Class I bike path extends along a utility corridor approximately one-quarter mile north of the project site. Sidewalks have been installed on both sides of the segment of Hammer Lane from Holman Road to SR 99, but no sidewalks have been installed on either side of Maranatha Drive south of Hammer Lane.

Environmental Impacts and Mitigation Measures

a) Vehicle Traffic on Local Roadways and Freeway Segments.

Under Existing Plus Approved Projects conditions with the proposed project all nine intersections of the intersections evaluated in the TIA would operate at LOS C or better, including the driveways. This exceeds the minimum LOS considered acceptable by City guidelines. The three roadway segments also would operate at LOS C or better, exceeding the minimum acceptable LOS as provided by City standards (KD Anderson 2020). Since all intersections and roadway segments in the area would continue to operate at an acceptable LOS even with the proposed development and its anticipated traffic volumes, no mitigation measures are required, and project traffic impacts on local roadways and freeway segments are considered less than significant, consistent with the GPEIR findings in this issue area.

b) Vehicle Traffic on Regional Roadways and Freeway Segments.

As described in a) above, even with traffic from proposed development, the intersections and roadway segments analyzed in the traffic report would operate at an acceptable LOS, including the intersections of Hammer Lane with the SR 99 southbound and northbound ramps. As a result, the proposed development would be consistent with the Stockton 2040 General Plan and GPEIR and their analysis of impacts on regional roadways and freeway segments. Project impacts would be less than significant in this issue area, consistent with the GPEIR findings in this issue area.

It should be noted that the State now requires that traffic impacts of projects be analyzed using the vehicle miles traveled (VMT) metric. Stockton 2040 General Plan Policy TR-4.3 addresses the topic of VMT as an impact in CEQA documents. The policy advises using the threshold recommended by the California Office of Planning and Research (OPR). OPR issued a Technical Advisory that recommended a net increase in total VMT as a significance threshold for retail commercial projects (OPR 2018). The traffic report incorporated this significance threshold, determining the net change in vehicle travel by comparing project-related travel to the amount of travel that would occur without approval of the proposed project (KD Anderson 2020).

The traffic report stated that the proposed development is consistent with the Commercial designation of the Stockton 2040 General Plan; the GPEIR's analysis of VMT was based

on this same assumption using Institute for Transportation Engineers (ITE) trip generation data. The methodology used in the traffic report compared VMT associated with the project with GPEIR predictions of VMT for the project site and other commercial development, indicating that a net increase in total VMT might indicate a significant transportation impact. The traffic report determined that the project would not increase VMT compared to assumed future development under the current General Plan designation. As a result, VMT impacts are considered less than significant, consistent with the GPEIR findings in this issue area.

c) Air Traffic Patterns.

As noted in Section 3.3.8, Hazards and Hazardous Materials, the project site is not within any of the safety zones of Stockton Metropolitan Airport. There are no other airports or airstrips in the project vicinity. The project proposes a 141-room hotel, an approximately 3% addition to the estimated countywide supply of hotel/motel rooms, so the project is not expected to substantially influence passenger traffic at the airport. The proposed project would have no impact related to air traffic patterns.

d) Hazards Due to Design Features or Incompatible Uses.

The existing intersection of Hammer Lane and Maranatha Drive is designed to City standards and controlled by an existing traffic signal. The TIA noted that the intersection provides more than enough capacity to accommodate the traffic that would be generated by the project, as evidenced by the acceptable LOS level at the intersection with the project (KD Anderson 2020). Project driveways would also be required to be designed to City standards, subject to City approval.

Project construction would involve movement of construction equipment onto and from the site and in-street construction for roadway frontage improvements and connection to utility lines. As noted in Section 3.3.8, Hazards and Hazardous Materials, this is not expected to require closure or major restrictions on public use of the roads, and the project would not obstruct any roadways and would provide adequate access to and from the site. Project impacts related to potential road hazards would be less than significant, consistent with the GPEIR findings in this issue area.

Vegetation, structures, and horizontal and vertical curvature can potentially impair the distance at which approaching vehicles can be seen by drivers waiting to depart a project site driveway. This distance is referred to as sight distance. Sight distance determines the amount of time a driver has to execute a maneuver. The traffic report evaluated potential sight distances issues from the proposed driveways and concluded that impacts would be less than significant with no mitigation required.

The project would not generate a large number of truck trips. However, because of their relatively large turning radius, fuel trucks may be unable to connect with fuel delivery points without traveling outside of project site driveway curb cuts, or traveling outside of on-site driveways. As part of the traffic report, a truck turning path analysis was conducted to assess the ability of fuel trucks to access the project site and connect with fuel delivery points without traveling outside of designated driveways. The analysis concluded that fuel delivery trucks would be able to approach the fuel delivery points, deliver fuel, and depart the fuel delivery points without traveling outside of designated driveways. As a result, this

impact is considered less than significant.

As noted in the traffic report, LOS would be acceptable at the Hammer Lane and the North Project Driveway. However, with the anticipated traffic volumes and the 40 mph speed limit on Hammer Lane, vehicles slowing down to make the eastbound-to-southbound right turn on the driveway could potentially conflict with vehicles traveling at full speed making the eastbound through movement. An eastbound-to-southbound right-turn lane at this location is recommended. The right-turn lane would provide spatial separation between vehicles making the inbound right turn movement and vehicles making the through movement, and would avoid the potential of conflict between these vehicles. The project applicant will incorporate this feature in the final site plan when it is prepared and submitted to the City.

In summary, the traffic report evaluated several potential traffic hazard issues associated with the project and concluded that none were significant. Project impacts related to traffic hazards would be less than significant.

e) Adequate Emergency Vehicle Access.

Access to the proposed project site would be provided by two driveways off Maranatha Drive, one driveway off SR 99 Frontage Road, and two driveways off Hammer Lane, along with internal connections between the commercial center and hotel areas. With these driveways and connections, adequate access would be provided for emergency vehicles to the project site. Project impacts on emergency access would be less than significant, consistent with the GPEIR findings in this issue area.

f) Conflict with Non-vehicular Transportation Plans.

Proposed development would not interfere with, nor adversely affect, bus routes and bicycle and sidewalk facilities. The project would add to these facilities by installing sidewalk along the Maranatha Drive and SR 99 Frontage Road frontages. The project would have no impact related to non-vehicular transportation plans.

3.3.15 UTILITIES AND SERVICE SYSTEMS

Environmental Issue Area	Conclusion in GPEIR	Does the project involve new impacts?	New circumstances involving new impacts?	New information requiring new analysis or verification?	Mitigation required?
a) Adequacy of water supplies	Less than significant	No	No	No	None required
b) New or expanded water facilities	Less than significant	Yes	No	No	None required
c) Wastewater treatment requirements	Less than significant	No	No	No	None required
d) New or expanded wastewater facilities	Less than significant	Yes	No	No	None required
e) Adequacy of wastewater treatment capacity	Less than significant	No	No	No	None required
f) New or expanded storm water facilities	Less than significant	Yes	No	No	None required
g) Adequacy of landfill capacity	Less than significant	No	No	No	None required
h) Compliance with solid waste statutes and regulations	Less than significant	No	No	No	None required
i) New or expanded energy supplies and facilities	Less than significant	No	No	No	None required

ENVIRONMENTAL SETTING

GPEIR

The General Plan and GPEIR forecast total 2040 water supply available to be about 122,840 acre-feet per year, or approximately 109.6 million gallons per day (mgd). On that basis, the two water purveyors serving Stockton – the City and Cal Water – forecast that they will have sufficient water supplies to meet projected demands from development allowed by the General Plan, and therefore would not require increased water supplies. Therefore, the GPEIR found that impacts related to water supplies would be less than significant.

Planned new development would require additional water tanks, pumping facilities, and new and expanded water mains. General Plan and Water Master Plan policies and actions

that define the direction for and means of water utility infrastructure improvements as required to serve new development. While the GPEIR addresses water infrastructure issues on a programmatic level, it considers water infrastructure impacts less than significant.

Wastewater treatment requirements for discharges from the Stockton Regional Wastewater Control Facility are set forth in CVRWQCB Order No. R5-2014-0070-03. Development allowed by the General Plan would include new residential, industrial, and commercial demands on this system, subject to discharge limits and other regulations. The GPEIR projects that discharges from new development would not cause exceedances of wastewater treatment requirements for effluent from the Regional Wastewater Control Facility, and that impacts on the wastewater treatment facility would be less than significant. Total wastewater generation under the General Plan in 2040 would be approximately 59.7 mgd, a net increase of 22.5 mgd from existing conditions. Forecast wastewater generation and peak-hour wet-weather flows are within the wastewater treatment capacity of the Regional Wastewater Control Facility, resulting in a less-than-significant impact.

New development would require construction of new and replacement wastewater pump stations, new sewer mains and upsizing of existing mains. The GPEIR addresses wastewater infrastructure issues and finds that wastewater infrastructure impacts would be less than significant.

Anticipated storm drainage system requirements to accommodate 2040 development would require increases in storm water storage and pumping capacity outside of approved/pending development projects, which are responsible for their own separate storm water plans. The GPEIR addresses storm water infrastructure issues and finds them to be less than significant.

Development allowed under the General Plan is estimated to generate a net increase of about 193,381 tons of solid waste per year added to existing total of 310,000 tons per year after removal of recyclable material. The three landfills serving the GPEIR Study Area have a combined residual capacity of nearly 2.6 million tons per year, providing sufficient landfill capacity and resulting in a less than significant solid waste impact. General Plan and existing policies and programs would divert and recycle 50 percent of solid waste from construction and demolition and other recycling and composting in accordance with AB 939, AB 341, and AB 1826. Compliance with these requirements would reduce impacts to a level that would be less than significant.

Development allowed by the General Plan would increase demand for electricity and natural gas. Some of this development could occur in undeveloped areas and increase development intensity in already developed areas. Therefore, some new and/or expanded transmission and distribution lines and pipelines may be required to serve new development. The 2040 General Plan indicates there are sufficient electricity and natural gas supplies to serve allowable development under the Plan. In addition, the General Plan includes policies and actions that avoid and reduce inefficient, wasteful, and unnecessary energy consumption and promote energy efficiency in transportation. New projects also would comply with the energy conservation provisions of the California Building Code and CALGreen adopted by the City. While the GPEIR addresses energy infrastructure issues on a programmatic level, it considers energy supply and facility impacts to be less

than significant.

Project Site

In the unincorporated areas of San Joaquin County, domestic water needs are usually met on-site by individual owners through groundwater wells. Upon annexation, water service would be provided by the City of Stockton Municipal Utilities Department (COSMUD). A 24-inch water transmission main, is located along Hammer Lane. City water lines are located within Hammer Lane and the SR 99 West Frontage Road. The project includes extensions of the existing water system to serve the hotel site and installation of a new water line along the Maranatha Drive frontage of the commercial center project.

In the unincorporated areas of San Joaquin County, sewage disposal needs are usually met on-site by individual owners through individual or collective septic tank/leach field systems. Upon annexation, the project site would connect to the City's wastewater system. Existing sewer lines in Hammer Lane would be extended to serve the retail commercial and hotel elements of the project; sewer connections would be engineered to allow connection to future sewer service along Maranatha Drive to be constructed in conjunction with development of the Origone Ranch.

Currently, there are no storm drainage systems within or serving the project site. The project site would be served by the City's storm water drainage system upon annexation. In the project vicinity, there is one storm drainage line at least 39 inches in diameter beneath Hammer Lane, along with smaller-diameter drainage lines. Two lift stations are located on Hammer Lane near the railroad tracks. The project will include storm drainage treatment and storage facilities consistent with the City's Storm Water Management Plan and its Storm Water Quality Control and Criteria Plan, including underground detention and orifice control to meter the flows to pre-project conditions. Existing storm drains in Hammer Lane would be extended to serve the project; storm drain connections would be engineered to allow connection to future storm drainage service along Maranatha Drive, to be constructed in conjunction with future development of the Origone Ranch.

The San Joaquin County Department of Public Works, Solid Waste Division currently has overall responsibility for solid waste collection in the unincorporated area. Upon annexation, solid waste collectors franchised by the City would collect solid waste and send it to the County landfills.

Electrical usage within the County is served from a transmission network owned by PG&E. In the project vicinity, 115-kV transmission lines approximately parallel SR 99 to northeastern Stockton and the Morada area. PG&E electrical facilities in the project area include overhead 12-kV distribution lines located along Hammer Lane. Centralized natural gas service is available in most of the urbanized portions of the County from PG&E, the only provider of such service. Interregional gas mains are located along the SR 99 corridor, and branch lines extend to and through the cities, with service pipelines located primarily within city streets. PG&E gas lines are located along Hammer Lane.

Environmental Impacts and Mitigation Measures

a) Adequacy of Water Supplies.

The proposed project is consistent with Stockton 2040 General Plan Commercial land use designation for the site. Future water use on the site would be consistent with General Plan forecasts, which are based on planned land uses. The 2040 General Plan indicates that sufficient water supplies are available to meet projected demands from development. New water supplies would not be required to meet projected demands. Project impacts on water supplies would be less than significant, consistent with the GPEIR findings in this issue area.

b) New or Expanded Water Facilities.

Existing water mains are available in Hammer Lane. The commercial and hotel portions of the project will connect to these lines; the commercial project will also connect to a new 12-inch diameter water main to be installed in Maranatha Drive as part of the commercial center project. As the proposed project would be consistent with Stockton 2040 General Plan land use designations and with adopted Utility Master Plan Supplements, the project would not require additional infrastructure that is unplanned. Since all work would occur beneath existing roads, no significant environmental impacts related to water line installation are anticipated. Project impacts related to water infrastructure would be less than significant, consistent with the GPEIR findings in this issue area.

c) Wastewater Treatment Requirements.

The proposed project is a commercial development, which includes food service establishments. These establishments and other commercial activities would be subject to applicable City sewer regulations. The project would be consistent with Stockton 2040 General Plan land use designations for the site. Because of this, the project would not place an unusual demand upon wastewater treatment facilities. Project impacts on wastewater treatment would be less than significant, consistent with the GPEIR findings in this issue area.

d) New or Expanded Wastewater Facilities.

An existing sewer main is beneath Hammer Lane, and the proposed project would connect to this main through a main extension. As the proposed project would be consistent with Stockton 2040 General Plan land use designations and with adopted Utility Master Plan Supplements, the project would not require additional infrastructure that is unplanned. Since all work would occur beneath existing roads, no significant environmental impacts related to water line installation are anticipated. Project impacts related to wastewater infrastructure would be less than significant, consistent with the GPEIR findings in this issue area.

e) Adequacy of Wastewater Treatment Capacity.

As noted in c) above, the project would be consistent with Stockton 2040 General Plan land use designations for the site. Because of this, the project would not place an unusual demand upon wastewater treatment capacity. Project impacts on wastewater treatment capacity would be less than significant, consistent with the GPEIR findings in this issue area.

f) New or Expanded Storm Water Facilities.

As the proposed project would be consistent with Stockton 2040 General Plan land use designations and with adopted Utility Master Plan Supplements, the project would not require additional infrastructure that is unplanned. The on-site storm drain system for the project site would include detention and orifice control to meter the flows to pre-project conditions. No off-site storm drainage facilities are planned for the proposed project other than connections to existing storm drainage lines, so no significant environmental impacts related to storm water line installation are anticipated. Project impacts related to storm water infrastructure would be less than significant, consistent with the GPEIR findings in this issue area.

g) Adequacy of Landfill Capacity.

The project site would have solid waste service provided by City franchisees upon annexation. The project would be consistent with Stockton 2040 General Plan land use designations for the site. Because of this, the project would not place an unusual demand upon landfill capacity. Project impacts on landfill capacity would be less than significant.

h) Compliance with Solid Waste Statutes and Regulations.

The proposed project would comply with all applicable codes, statutes, and regulations related to solid waste. The project would have no impact related to solid waste regulatory compliance.

i) New or Expanded Energy Supplies and Facilities.

Electrical and natural gas lines are available in the project vicinity. The project would be consistent with Stockton 2040 General Plan land use designations for the site. Because of this, the project would not place an unusual demand upon energy supplies. As noted, new development would be required to comply with adopted building codes and their energy conservation provisions. Project impacts on energy supplies and facilities would be less than significant.

4.0 FINDINGS AND CONCLUSION

Based on the analysis in Chapter 3.0 of this Initial Study/Addendum, the proposed Hammer Lane Annexation and Development Project would not result in any substantial change in the GPEIR environmental impact analysis, as it pertains to proposed commercial development of the site consistent with its Commercial land use designation under the Stockton General Plan. Compared to the GPEIR environmental impact conclusions, separately or in aggregate, the project would not result in new significant environmental effects or a substantial increase in the severity of significant effects as described in the adopted GPEIR.

Additionally, the City has not identified any changes in the circumstances of the project that would involve potential for new or more severe environmental effects than were described in the GPEIR. The City has not identified any new information related to the project that would involve potential for new or more severe environmental effects than were identified in the GPEIR.

The analysis and conclusions in the GPEIR adequately describe the potentially significant environmental effects of the proposed project and the mitigation needed to reduce those effects to a level that would be less than significant. The project conforms to the criteria for appropriateness of adopting an addendum described in CEQA Guidelines Section 15164. Therefore, it is appropriate for the City to adopt this Addendum to the previously adopted GPEIR for the Hammer Lane Annexation and Development Project.

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**APPENDIX A
GPEIR MITIGATION MONITORING
AND REPORTING PROGRAM**

6. Mitigation Monitoring and Reporting Program

This Mitigation Monitoring and Reporting Program (MMRP) has been prepared for the proposed Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements, herein referred to as the “proposed project.” The purpose of the MMRP is to ensure the implementation of mitigation measures identified as part of the environmental review for the proposed project. The MMRP includes the following information:

- The full text of the mitigation measures;
- The party responsible for implementing the mitigation measures;
- The timing for implementation of the mitigation measure;
- The agency responsible for monitoring the implementation; and
- The monitoring action and frequency.

The mitigation measures in this MMRP shall be applied to all future development anywhere in the city unless otherwise specified in the specific mitigation measure. The City of Stockton must adopt this MMRP, or an equally effective program, if it approves the proposed project with the mitigation measures that were adopted or made conditions of project approval.

MITIGATION MONITORING AND REPORTING PROGRAM

TABLE 6-1 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
AGRICULTURAL AND FORESTRY RESOURCES					
AG-1: Prior to project approval, if a development project will convert prime farmland, farmland of statewide importance, or unique farmland to a non-agricultural use, the project applicant shall demonstrate participation in the City's agricultural conservation program, which requires either dedication of an agricultural conservation easement at a 1:1 ratio or payment of an in-lieu agricultural mitigation fee.	Project applicant	Prior to project approval	City of Stockton Planning and Engineering Division	Plan review and approval	Once for the confirmation of program participation for each project
AIR QUALITY					
AQ-1: Implement Mitigation Measure AQ-3 to further reduce long-term criteria air pollutant emissions.	Project applicant	During the building permit and site development review process and prior to issuance	City of Stockton Planning and Engineering Division	Plan review and approval	Once for the preparation of the technical assessment
AQ-2: Prior to issuance of any construction permits for development projects subject to California Environmental Quality Act (CEQA) review (i.e., non-exempt projects), development project applicants shall prepare and submit to the City of Stockton Planning and Engineering Division a technical assessment evaluating potential project construction-related air quality impacts. The evaluation shall be prepared in conformance with San Joaquin Valley Air Pollution Control District (SJVAPCD) methodology in assessing air quality impacts. The prepared evaluation for projects that meet the SJVAPCD Small Projects Analysis Level (SPAL) screening criteria shall at minimum, identify the primary sources of construction emissions and include a discussion of the applicable SJVAPCD rules and regulations and SPAL screening criteria to support a less than significant conclusion. For projects that do not meet the SPAL screening criteria, project-related construction emissions shall be quantified. If construction-related criteria air pollutants are determined to	Project applicant	During the building permit and site development review process and prior to permit issuance	City of Stockton Planning and Engineering Division	Plan review and approval	Once for the preparation of the technical assessment for construction related air quality impacts

MITIGATION MONITORING AND REPORTING PROGRAM

TABLE 6-1 MITIGATION MONITORING AND REPORTING PROGRAM

Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
<p>Mitigation Measures</p> <p>have the potential to exceed the SJVAPCD adopted thresholds of significance, as identified in the Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI), the City of Stockton Planning and Engineering Division shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during construction activities to below these thresholds. These identified measures shall be incorporated into appropriate construction documents (e.g., construction management plans) submitted to the City and shall be verified by the City's Planning and Engineering Division. Mitigation measures to reduce construction-related emissions could include, but are not limited to:</p> <ul style="list-style-type: none"> ▪ Using construction equipment rated by the United States Environmental Protection Agency as having Tier 3 (model year 2006 or newer) or Tier 4 (model year 2008 or newer) emission limits, applicable for engines between 50 and 750 horsepower. A list of construction equipment by type and model year shall be maintained by the construction contractor on-site, which shall be available for City review upon request. ▪ Ensuring construction equipment is properly serviced and maintained to the manufacturer's standards. ▪ Use of alternative-fueled or catalyst-equipped diesel construction equipment, if available and feasible. ▪ Clearly posted signs that require operators of trucks and construction equipment to minimize idling time (e.g., five-minute maximum). ▪ Preparation and implementation of a fugitive dust control plan that may include the following measures: <ul style="list-style-type: none"> • Disturbed areas (including storage piles) that are not being actively utilized for construction purposes shall be effectively stabilized using water, chemical stabilizer/suppressant, or covered with a tarp or other suitable cover (e.g., revegetated). • On-site unpaved roads and offsite unpaved access roads 				

MITIGATION MONITORING AND REPORTING PROGRAM

TABLE 6-1 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
<ul style="list-style-type: none"> shall be effectively stabilized using water or chemical stabilizer/suppressant. Land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled utilizing application of water or by presoaking. Material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained when materials are transported offsite. Operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions.) (Use of blower devices is expressly forbidden.) (Utilize electric-powered vacuums or devices to capture materials.) Following the addition of materials to or the removal of materials from the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant. Within urban areas, trackout shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday. Any site with 150 or more vehicle trips per day shall prevent carryout and trackout. Limit traffic speeds on unpaved roads to 15 mph. Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than 1 percent. Install wheel washers for all exiting trucks or wash off all trucks and equipment leaving the project area. Adhere to Regulation VIII's 20 percent opacity limitation, 					

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TABLE 6-1 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
<ul style="list-style-type: none"> Enter into a Voluntary Emissions Reduction Agreement (VERA) with the SJVAPCD. The VERA shall identify the amount of emissions to be reduced, in addition to the amount of funds to be paid by the project applicant to the SJVAPCD to implement emission reduction projects required for the project. 					
<p>as applicable.</p> <ul style="list-style-type: none"> AQ-3: Prior to discretionary approval by the City of Stockton for development projects subject to California Environmental Quality Act (CEQA) review (i.e., non-exempt projects), project applicants shall prepare and submit a technical assessment evaluating potential project operation phase-related air quality impacts to the City of Stockton Planning and Engineering Division for review and approval. The evaluation shall be prepared in conformance with San Joaquin Air Pollution Control District (SJVAPCD) methodology in assessing air quality impacts. If operation-related air pollutants are determined to have the potential to exceed the SJVAPCD-adopted thresholds of significance, as identified in the Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI), the City of Stockton Planning and Engineering Division shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during operational activities. The identified measures shall be included as part of the conditions of approval. Possible mitigation measures to reduce long-term emissions can include, but are not limited to the following: <ul style="list-style-type: none"> For site-specific development that requires refrigerated vehicles, the construction documents shall demonstrate an adequate number of electrical service connections at loading docks for plug-in of the anticipated number of refrigerated trailers to reduce idling time and emissions. Applicants for manufacturing and light industrial uses shall consider energy storage and combined heat and power in appropriate applications to optimize renewable energy 	Project applicant	During the building permit and site development review process and prior to permit issuance	City of Stockton Planning and Engineering Division	Plan review and approval	Once for the preparation of the technical assessment for potential operation air quality impacts

MITIGATION MONITORING AND REPORTING PROGRAM

TABLE 6-1 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
<ul style="list-style-type: none"> generation systems and avoid peak energy use. Site-specific developments with truck delivery and loading areas and truck parking spaces shall include signage as a reminder to limit idling of vehicles while parked for loading/unloading in accordance with Section 2485 of 13 CCR Chapter 10. Provide changing/shower facilities as specified, at minimum, or greater than in the guidelines in Section A5.106.4.3 of the CALGreen Code (Nonresidential Voluntary Measures). Provide bicycle parking facilities equivalent to or greater than as specified in Section A4.106.9 (Residential Voluntary Measures) of the CALGreen Code. Provide preferential parking spaces for low-emitting, fuel-efficient, and carpool/van vehicles equivalent to or greater than Section A5.106.5.1 of the CALGreen Code (Nonresidential Voluntary Measures). Provide facilities to support electric charging stations per Section A5.106.5.3 (Nonresidential Voluntary Measures) and Section A5.106.8.2 (Residential Voluntary Measures) of the CALGreen Code. Applicant-provided appliances shall be Energy Star-certified appliances or appliances of equivalent energy efficiency (e.g., dishwashers, refrigerators, clothes washers, and dryers). Installation of Energy Star-certified or equivalent appliances shall be verified by Building & Safety during plan check. Applicants for future development projects along existing and planned transit routes shall coordinate with the City Stockton and San Joaquin Regional Transit District to ensure that bus pad and shelter improvements are incorporated, as appropriate, and that these transit improvements consider and implement design features (e.g., pullout lanes for buses) to avoid or reduce impediment/queuing of vehicles. Applicants for future development projects shall enter 					

MITIGATION MONITORING AND REPORTING PROGRAM

TABLE 6-1 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
into a Voluntary Emissions Reduction Agreement (VERA) with the San Joaquin Valley Air Pollution Control District (SJVAPCD). The VERA shall identify the amount of emissions to be reduced, in addition to the amount of funds to be paid by the project applicant to the SJVAPCD to implement emission reduction projects required for the project.	Project applicant	During the building permit and site development review process and prior to permit issuance	City of Stockton Planning and Engineering Division	Plan review and approval	Once for the preparation of the technical assessment
AQ-4a: Implement Mitigation Measures AQ-2 and AQ-3 to further reduce construction and operation-related criteria air pollutant emissions.	Project applicant	During the building permit and site development review process and prior to permit issuance	City of Stockton Planning and Engineering Division	Plan review and approval	Once for the preparation of the technical assessment
<p>AQ-4b: Prior to discretionary approval, applicants for development projects that are subject to the California Environmental Quality Act (CEQA) shall assess their projects to the San Joaquin Valley Air Pollution Control District's (SJVAPCD) Rule 9510 Applicability Thresholds as follows:</p> <ul style="list-style-type: none"> ▪ 50 residential units; ▪ 2,000 square feet of commercial space; ▪ 25,000 square feet of light industrial space; ▪ 100,000 square feet of heavy industrial space; ▪ 20,000 square feet of medical office space; ▪ 39,000 square feet of general office space; ▪ 9,000 square feet of education space; ▪ 10,000 square feet of government space; ▪ 20,000 square feet of recreational space; or ▪ 9,000 square feet of space not identified above. <p>Applicants for development projects subject to CEQA that do not meet the SJVAPCD Rule 9510 Applicability Thresholds shall assess whether project-related construction and operational emissions exceed the SJVAPCD 100 pounds per day ambient air quality screening threshold. Applicants for development projects that exceed this ambient air quality screening</p>	Project applicant	During the building permit and site development review process and prior to permit issuance	City of Stockton Planning and Engineering Division	Plan review and approval	Once for the preparation of the technical assessment

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Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
threshold shall prepare or have prepared an ambient air quality analysis, consistent with the SJVAPCD Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI), to assess whether the subject development project would cause or contribute to a violation of any California Ambient Air Quality Standard or National Ambient Air Quality Standard. The ambient air quality analysis shall identify measures to reduce impacts as necessary. Recommended measures may include those identified in Mitigation Measures AQ-2 and AQ-3. The related recommendations of the ambient air quality analysis shall be incorporated into all construction management and design plans and which shall be submitted to the City and verified by the City's Planning and Engineering Division.					
AQ-5: Prior to discretionary project approval, applicants for industrial or warehousing land uses in addition to commercial land uses that would generate substantial diesel truck travel (i.e., 100 diesel trucks per day or 40 or more trucks with diesel-powered transport refrigeration units per day based on the California Air Resources Board recommendations for siting new sensitive land uses), shall contact the San Joaquin Valley Air Pollution Control District (SJVAPCD) or the City of Stockton in conjunction with the SJVAPCD to determine the appropriate level of health risk assessment (HRA) required. If preparation of an HRA is required, all HRAs shall be submitted to the City of Stockton and the SJVAPCD for evaluation.	Project applicant	During the building permit and site development review process and prior to permit issuance	City of Stockton Planning and Engineering Division	Plan review and approval	Once for the preparation of the health risk assessment
The HRA shall be prepared in accordance with policies and procedures of the State Office of Environmental Health Hazard Assessment and the SJVAPCD. If the HRA shows that the incremental cancer risk exceeds ten in one million (10E-06) or the risk thresholds in effect at the time a project is considered, or that the appropriate noncancer hazard index exceeds 1.0 or the thresholds as determined by the SJVAPCD at the time a project is considered, the applicant will be required to identify and demonstrate that measures are capable of reducing potential cancer and noncancer risks to an acceptable level,					

MITIGATION MONITORING AND REPORTING PROGRAM

TABLE 6-1 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
including appropriate enforcement mechanisms.					
Measures to reduce risk impacts may include but are not limited to:					
▪ Restricting idling on-site beyond Air Toxic Control Measures idling restrictions, as feasible.					
▪ Electrifying warehousing docks.					
▪ Requiring use of newer equipment and/or vehicles.					
▪ Restricting offsite truck travel through the creation of truck routes.					
Measures identified in the HRA shall be identified as mitigation measures in the environmental document and/or incorporated into the site development plan as a component of the proposed project.					
AQ-6: Prior to project approval, if it is determined during project-level environmental review that a project has the potential to emit nuisance odors beyond the property line, an odor management plan shall be prepared and submitted by the project applicant prior to project approval to ensure compliance with San Joaquin Valley Air Pollution Control District (SJVAPCD) Rule 4102. The following facilities that are within the buffer distances specified from sensitive receptors (in parentheses) have the potential to generate substantial odors:	Project applicant	Prior to project approval	City of Stockton Planning and Engineering Division	Plan review and approval	Once for the preparation of the Odor Management Plan
▪ Wastewater Treatment Plan (2 miles)					
▪ Sanitary Landfill (1 mile)					
▪ Transfer Station (1 mile)					
▪ Composting Facility (1 mile)					
▪ Petroleum Refinery (2 miles)					
▪ Asphalt Batch Plan (1 mile)					
▪ Chemical Manufacturing (1 mile)					
▪ Fiberglass Manufacturing (1 mile)					
▪ Painting/Coating Operations (1 mile)					
▪ Food Processing Facility (1 mile)					
▪ Feed Lot/ Dairy (1 mile)					

MITIGATION MONITORING AND REPORTING PROGRAM

TABLE 6-1 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
<ul style="list-style-type: none"> Rendering Plant (1 mile) <p>The Odor Management Plan prepared for these facilities shall identify control technologies that will be utilized to reduce potential odors to acceptable levels, including appropriate enforcement mechanisms. Control technologies may include but are not limited to scrubbers (e.g., air pollution control devices) at an industrial facility. Control technologies identified in the odor management plan shall be identified as mitigation measures in the environmental document and/or incorporated into the site plan.</p>					
GREENHOUSE GAS EMISSIONS					
<p>GHG-1: Within 24 months of adoption of the proposed General Plan, the City of Stockton shall proceed to adoption hearings for an update to its Climate Action Plan (CAP). The CAP shall provide:</p> <ul style="list-style-type: none"> GHG inventories of existing and 2030 GHG levels; Targets for 2030 from land uses under the City's jurisdiction based on the goals of SB 32; and Tools and strategies for reducing GHG emissions in accordance with the 2030 goals of the CAP. <p>The City shall consider the following GHG reduction measures in its CAP Update:</p> <ul style="list-style-type: none"> Reevaluate the City's current green building requirements (Stockton Municipal Code Chapter 15.72, Green Building Standards) every five years to consider additional requirements for substantial new residential and non-residential development to ensure that new development achieves a performance objective consistent with the best performing (top 25 percent) of city green building measures in the state. Require financing and/or installing energy-saving retrofits on existing structures as potential mitigation measures for 	City of Stockton	Within 24 months of adoption of the proposed General Plan	City of Stockton Planning and Engineering Division	Update the Climate Action Plan	Once for the update of the Climate Action Plan

MITIGATION MONITORING AND REPORTING PROGRAM

TABLE 6-1 MITIGATION MONITORING AND REPORTING PROGRAM

MITIGATION MEASURES	PARTY RESPONSIBLE FOR IMPLEMENTATION	IMPLEMENTATION TIMING	AGENCY RESPONSIBLE FOR MONITORING	MONITORING ACTION	MONITORING FREQUENCY
<p>discretionary projects that have significant GHG impacts as part of the CEQA process.</p> <ul style="list-style-type: none"> ▪ Utilize transfer of development rights and other mechanisms, such as an infill mitigation bank, to enhance the viability of development in the Greater Downtown. ▪ Establish a goal for 15 percent of existing development to install solar panels over carports. ▪ Establish a goal to achieve 10 percent of non-residential electricity and 5 percent of residential electricity entirely by solar. ▪ Offer incentives for contractors that use electric equipment when bidding on City contracts. ▪ Limit non-essential idling of large construction equipment to no more than 3 minutes. <p>In addition, to implement the CAP, the City shall develop key ordinances, programs, and policies required to promote voluntary, incentive-based measures in the CAP, establish the planning framework for the performance-based development review process, and support and implement the local mandatory GHG reduction measures. These implementation tasks include:</p> <ul style="list-style-type: none"> ▪ Update the community GHG inventory to monitor emissions trends every five years. ▪ In 2030, develop a plan for post-2030 actions. ▪ Appoint an Implementation Coordinator to oversee the successful implementation of all selected GHG reduction strategies. The primary function of the Implementation Coordinator will be to create a streamlined approach to manage implementation of the CAP. The Implementation Coordinator will also coordinate periodic community outreach to leverage community involvement, interest, and perspectives. 					

MITIGATION MONITORING AND REPORTING PROGRAM

TABLE 6-1 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
HYDROLOGY AND WATER QUALITY					
HYDRO-5: Complete a citywide storm drainage master plan, including hydrologic and hydraulic models for existing land use conditions and for the land uses anticipated in 2040 under the proposed General Plan. The master plan should identify the future stormwater infrastructure needs and develop a current stormwater capital improvement plan. As part of this process, identify areas that have constraints, prioritize watersheds to be modeled, and evaluate the City stormwater fee program for potential revisions. In addition, require new development to complete stormwater plans covering drainage, flood control, and storm water quality/permitting. Use the master plan and project-level stormwater plans to assess future development, and require that future development construct the required on- and off-site infrastructure. Implementation of this mitigation measure should be timed to anticipate and precede significant developments that would be most likely to place large demands on the current stormwater system.	City of Stockton	To precede significant developments that would be most likely to place large demands on the current stormwater system	City of Stockton Planning and Engineering Division	Plan review and approval	Once for the completion of the citywide storm drainage master plan and ongoing as part of project approval for preparation of project-level stormwater plans.
TRANSPORTATION AND TRAFFIC					
TRAF-1a: The City shall implement the following to reduce the severity of potential LOS impacts on the following City roadway segments: <ul style="list-style-type: none"> ▪ March Lane at UPRR. The adopted 2035 General Plan identifies an eight-lane cross section for this roadway from North El Dorado Street to State Route 99. The proposed General Plan envisions a six-lane cross-section through 2040. With an eight-lane cross-section, the roadway would operate within the established LOS policy. Therefore, to mitigate the impact, the City shall reserve sufficient right-of-way to accommodate an eight-lane cross-section, plus associated turn pockets at intersections. Construction of an eight-lane cross-section would result in an acceptable level of service for vehicles, but could preclude the provision of 	City of Stockton	Ongoing	City of Stockton Public Works	Ongoing	Ongoing

MITIGATION MONITORING AND REPORTING PROGRAM

TABLE 6-1 MITIGATION MONITORING AND REPORTING PROGRAM

Table 6-1	MITIGATION MONITORING AND REPORTING PROGRAM	Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
	<p>Mitigation Measures</p> <p>facilities that would encourage higher levels of transit ridership, walking and bicycling along the corridor.</p> <p>Prior to the construction of additional roadway improvements along the March Lane corridor, the City shall conduct a focused complete streets study to analyze and evaluate peak hour and daily operations of March Lane between I-5 and State Route 99 to identify the cross-section required to accommodate existing and planned growth. The complete streets study shall consider the potential mode shift under scenarios that provide additional bicycle, pedestrian, and transit facilities along the corridor. Should the complete streets study show that corridor operations would fall within the established level of service standard for the six-lane cross-section, an implementation program of the identified bicycle, pedestrian, and transit improvements shall be required. Alternatively, the mitigation measure is to provide an eight-lane cross-section for vehicles.</p> <p>Implementation of this mitigation measure would reduce the potential impact to a <i>less-than-significant</i> level.</p> <p>* March Lane between West Lane and Bianchi Road. The adopted 2035 General Plan identifies an eight-lane cross section for this roadway from North El Dorado Street to State Route 99. The proposed General Plan envisions a six-lane cross-section through 2040. With an eight-lane cross-section, the roadway would operate within the established LOS policy. Therefore, to mitigate the impact, the City shall reserve sufficient right-of-way to accommodate an eight-lane cross-section, plus associated turn pockets at intersections.</p> <p>Prior to the construction of additional roadway improvements along the March Lane corridor, the City shall conduct a focused complete streets study to evaluate peak hour and daily operations of March Lane between I-5 and State Route 99 to identify the cross-section required to accommodate existing and planned growth. The analysis</p>					

MITIGATION MONITORING AND REPORTING PROGRAM

TABLE 6-1 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
<p>shall consider the potential mode shift under scenarios that provide additional bicycle, pedestrian, and transit facilities along the corridor. Should corridor operations fall within the established level of service standard with a six-lane cross-section, the study shall identify bicycle, pedestrian, and transit enhancements that are necessary to serve the corridor. Otherwise, the mitigation measure is to provide an eight-lane cross-section for vehicles. Implementation of this mitigation measure would reduce the potential impact to a <i>less-than-significant</i> level.</p> <ul style="list-style-type: none"> ▪ Dr. Martin Luther King Jr. Boulevard between I-5 and Airport Way. This section of Dr. Martin Luther King Jr. Boulevard is built out to its ultimate capacity and no further improvements are planned. Provision of parallel capacity in the area would provide alternative travel choices within this area of South Stockton, but is not expected to result in LOS D operations in the Cumulative with Proposed Plan condition. Therefore, this impact would remain <i>significant and unavoidable</i>. ▪ 8th Street between Pock Lane and D Street. This roadway section currently provides one travel lane in each direction with on-street parking within a 60-foot curb-to-curb right-of-way. There is sufficient right-of-way to modify the roadway cross-section to maintain on-street parking (8 feet), provide bicycle lanes (6 feet), one travel lane in each direction (10 feet), and a center two-way left-turn lane (12-feet). With modifications within the existing right-of-way, vehicular capacity could increase, reducing the impact to a less-than-significant level. Therefore, to mitigate the impact, the City shall conduct a detailed engineering study of 8th Street between El Dorado Street and Mariposa Road to identify roadway improvements that can be implemented within the existing right-of-way to improve travel for all modes, especially considering the potential for a grade-separated crossing of the railroad tracks, which would provide an 					

MITIGATION MONITORING AND REPORTING PROGRAM

TABLE 6-1 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
<p>additional east-west connection in South Stockton. Implementation of this mitigation measure would reduce this impact to a <i>less-than-significant</i> level.</p> <ul style="list-style-type: none"> ▪ Arch Airport Road between SR 99 and Quantas Lane. This section of Arch-Airport Road is built out to its ultimate capacity and no further improvements are planned. Provision of parallel capacity in the area would provide alternative travel choices within this area of South Stockton, but is not expected to result in LOS D operations in the Cumulative with Proposed Plan condition. Therefore, this impact would remain <i>significant and unavoidable</i>. ▪ California Street between Harding Way and Park Street. Prior to the construction of roadway improvements along the California Street corridor, the City shall conduct a focused complete streets study to evaluate peak hour and daily operations of California Street from north of Harding Way to south of Park Street. The evaluation shall consider the effect of providing exclusive bicycle facilities on peak hour and daily operations along the corridor. The study shall also evaluate parallel roadway facilities that could potentially see an increase in vehicle traffic with a lane reduction on California Street. <p>Should the study indicate vehicle operations would fall below the level of service standard for the facility, even considering potential traffic shifts to other roadways (and the secondary impact of those shifts), and the potential mode shift to non-auto travel modes, the mitigation measure is to retain the existing vehicle capacity and explore other alternatives for providing bicycle facilities through the corridor. Should the analysis indicate vehicle levels of service would remain within the City's standard for the roadway facility, the mitigation measure is to construct exclusive bicycle facilities within the existing cross-section. Implementation of this mitigation measure would reduce this impact to a <i>less-than-significant</i> level.</p>					

MITIGATION MONITORING AND REPORTING PROGRAM

TABLE 6-1 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
<p>• B Street between Dr. Martin Luther King Jr. Boulevard and 4th Street. The City shall reserve sufficient right-of-way to accommodate a four-lane cross-section, plus associated turn pockets at intersections.</p> <p>Prior to the construction of additional roadway improvements along the B Street corridor, the City shall conduct a focused complete streets study to evaluate peak hour and daily operations of B Street between Dr. Martin Luther King Jr. Boulevard and Arch-Airport Road to identify the cross-section required to accommodate existing and planned growth. The analysis shall consider the potential mode shift under scenarios that provide additional bicycle, pedestrian, and transit facilities along the corridor. Should corridor operations fall within the established level of service standard with a two-lane cross-section, the study shall identify bicycle, pedestrian, and transit enhancements that are necessary to serve the corridor. Otherwise, the mitigation measure is to provide a four-lane cross-section for vehicles. Implementation of this mitigation measure would reduce the potential impact to a <i>less-than-significant</i> level.</p> <p>TRAF-1b. The City shall implement the following to reduce the severity of potential LOS impacts on the following freeway segment:</p> <p>• State Route 99 between Farmington Road and Fremont Street. The Cumulative with Proposed Plan transportation analysis considers the widening of State Route 99 through Stockton to its ultimate planned width. No additional improvements have been identified. Implementation of the proposed General Plan and its associated policies are expected to provide alternative travel choices to Stockton residents and workers, shifting travel patterns and modes. However, deficient operations are expected to occur on State Route 99, and this impact would remain <i>significant and unavoidable</i>.</p>	City of Stockton	Ongoing	City of Stockton Public Works	Ongoing	Ongoing

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TABLE 6-1 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
TRAF-2: The City of Stockton shall continue to participate in planning efforts for regional transportation facilities.	City of Stockton	Ongoing	City of Stockton Public Works	Ongoing	Ongoing

2040 GENERAL PLAN UPDATE AND UTILITY MASTER PLAN SUPPLEMENTS
FINAL ENVIRONMENTAL IMPACT REPORT AND
MITIGATION MONITORING AND REPORTING PROGRAM
CITY OF STOCKTON

MITIGATION MONITORING AND REPORTING PROGRAM

APPENDIX B
AIR QUALITY MATERIALS

Hammer Lane Hotel - San Joaquin County, Annual

Hammer Lane Hotel San Joaquin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Fast Food Restaurant with Drive Thru	2.72	1000sqft	0.06	2,720.00	0
High Turnover (Sit Down Restaurant)	5.34	1000sqft	0.12	5,338.00	0
Hotel	141.00	Room	4.70	204,732.00	0
Automobile Care Center	1.00	1000sqft	0.02	1,000.00	0
Convenience Market With Gas Pumps	3.76	1000sqft	0.09	3,764.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	51
Climate Zone	2			Operational Year	2023

Utility Company Pacific Gas & Electric Company

CO2 Intensity (lb/MW/hr)	641.35	CH4 Intensity (lb/MW/hr)	0.029	N2O Intensity (lb/MW/hr)	0.006
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1.3 User Entered Comments & Non-Default Data

Hammer Lane Hotel - San Joaquin County, Annual

Project Characteristics -

Land Use - Total square footage. Unit amount for auto care center equivalent to 1 tunnel.

Construction Phase - Anticipated construction schedule.

Architectural Coating - Per SJVAPCD Rule 4601.

Vehicle Trips - Weekday Auto Care rate from ITE Trip Generation Manual 10th edition. Weekend rates based on observational data from car washes in Sacramento.

Fleet Mix - No heavy-duty trucks to use car wash.

Area Coating - Per SJVAPCD Rule 4601.

Construction Off-road Equipment Mitigation -

Water Mitigation -

Waste Mitigation -

Hammer Lane Hotel - San Joaquin County, Annual

EXHIBIT 1 - Addendum

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	108,777.00	109,327.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	326,331.00	327,981.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	50
tblAreaCoating	Area_EF_Nonresidential_Interior	150	50
tblAreaCoating	Area_Nonresidential_Exterior	108777	109327
tblAreaCoating	Area_Nonresidential_Interior	326331	327981
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorV alue	50	150
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorV alue	50	150
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	18.00	20.00
tblConstructionPhase	NumDays	8.00	20.00
tblConstructionPhase	NumDays	18.00	20.00
tblConstructionPhase	NumDays	5.00	10.00
tblFleetMix	HHD	0.06	0.00
tblFleetMix	LDT1	0.03	0.09
tblLandUse	LandUseSquareFeet	5,340.00	5,338.00
tblLandUse	LandUseSquareFeet	3,760.00	3,764.00
tblTripsAndVMT	HaulingTripNumber	36.00	0.00
tblVehicleTrips	DV_TP	51.00	28.00
tblVehicleTrips	PB_TP	28.00	51.00
tblVehicleTrips	ST_TR	23.72	718.00
tblVehicleTrips	SU_TR	11.88	718.00
tblVehicleTrips	WD_TR	23.72	503.00

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2.0 Emissions Summary**2.1 Overall Construction****Unmitigated Construction**

Year	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
					tons/yr								MT/yr			
2022	0.2184	2.0539	1.8704	4.0800e-003	0.2332	0.0900	0.3232	0.1039	0.0842	0.1880	0.0000	361.3099	361.3099	0.0689	0.0000	363.0329
2023	0.6005	0.8327	0.9381	2.0500e-003	0.0435	0.0348	0.0782	0.0118	0.0327	0.0445	0.0000	181.7091	181.7091	0.0306	0.0000	182.4746
Maximum	0.6005	2.0539	1.8704	4.0800e-003	0.2332	0.0900	0.3232	0.1039	0.0842	0.1880	0.0000	361.3099	361.3099	0.0689	0.0000	363.0329

Mitigated Construction

Year	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
					tons/yr								MT/yr			
2022	0.2184	2.0538	1.8704	4.0800e-003	0.1453	0.0900	0.2353	0.0577	0.0842	0.1419	0.0000	361.3096	361.3096	0.0689	0.0000	363.0327
2023	0.6005	0.8327	0.9381	2.0500e-003	0.0435	0.0348	0.0782	0.0118	0.0327	0.0445	0.0000	181.7089	181.7089	0.0306	0.0000	182.4744
Maximum	0.6005	2.0538	1.8704	4.0800e-003	0.1453	0.0900	0.2353	0.0577	0.0842	0.1419	0.0000	361.3096	361.3096	0.0689	0.0000	363.0327

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-1-2022	6-30-2022	0.8570	0.8570
2	7-1-2022	9-30-2022	0.7089	0.7089
3	10-1-2022	12-31-2022	0.7111	0.7111
4	1-1-2023	3-31-2023	0.6230	0.6230
5	4-1-2023	6-30-2023	0.8072	0.8072
		Highest	0.8570	0.8570

2.2 Overall Operational

Unmitigated Operational

Category	tons/yr										MT/yr					
	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
Area	0.9005	1.0000e-005	1.4100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7500e-003	2.7500e-003	1.0000e-005	0.0000	2.9300e-003
Energy	0.0346	0.3145	0.2641	1.8900e-003		0.0239	0.0239		0.0239	0.0239	0.0000	825.4527	825.4527	0.0284	0.0108	829.3800
Mobile	1.5451	8.5857	11.2282	0.0386	2.5279	0.0264	2.5543	0.6775	0.0246	0.7021	0.0000	3.568.201 ⁹	3.568.201 ⁹	0.2159	0.0000	3,573.599 ⁶
Waste						0.0000	0.0000		0.0000	0.0000	37.9999	0.0000	37.9999	2.2457	0.0000	94.1432
Water						0.0000	0.0000		0.0000	0.0000	2.0291	10.8639	12.8930	0.2089	5.0200e-003	19.6122
Total	2.4802	8.9002	11.4938	0.0405	2.5279	0.0503	2.5782	0.6775	0.0485	0.7260	40.0290	4,404.521 ³	4,444.550 ³	2.6990	0.0158	4,516.737 ⁸

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2.2 Overall Operational**Mitigated Operational**

Category	tons/yr										MT/yr					
	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
Area	0.9005	1.0000e-005	1.4100e-003	0.0000		1.0000e-005	1.0000e-005	1.0000e-005	1.0000e-005	1.0000e-005	0.0000	2.7500e-003	2.7500e-003	1.0000e-005	0.0000	2.9300e-003
Energy	0.0346	0.3145	0.2641	1.8900e-003		0.0239	0.0239	0.0239	0.0239	0.0239	0.0000	825.4527	825.4527	0.0284	0.0108	829.3800
Mobile	1.4673	8.0047	9.3490	0.0293	1.6954	0.0202	1.7156	0.4544	0.0188	0.4732	0.0000	2,710.5092	2,710.5092	0.1944	0.0000	2,715.3686
Waste						0.0000	0.0000		0.0000	0.0000	9.5000	0.0000	9.5000	0.5614	0.0000	23.5358
Water						0.0000	0.0000		0.0000	0.0000	1.6233	8.6911	10.3144	0.1671	4.0200e-003	15.6898
Total	2.4023	8.3191	9.6146	0.0312	1.6954	0.0441	1.7395	0.4544	0.0427	0.4971	11.1233	3,544.6558	3,555.7790	0.9514	0.0148	3,583.9771

3.0 Construction Detail**Construction Phase**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	3.14	6.53	16.35	23.04	32.93	12.38	32.53	32.93	12.00	31.53	72.21	19.52	20.00	64.75	6.32	20.65

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/1/2022	4/28/2022	5	20	
2	Site Preparation	Site Preparation	4/29/2022	5/12/2022	5	10	
3	Grading	Grading	5/13/2022	6/9/2022	5	20	
4	Building Construction	Building Construction	6/10/2022	4/27/2023	5	230	
5	Paving	Paving	4/28/2023	5/25/2023	5	20	
6	Architectural Coating	Architectural Coating	5/26/2023	6/22/2023	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 327,981; Non-Residential Outdoor: 109,327; Striped Parking Area: 0
(Architectural Coating – sqft)OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	158	0.38
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	6.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Paving	Paving Equipment	2	6.00	132	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

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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
Architectural Coating	1	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	91.00	36.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.0000e-003	0.0000	4.0000e-003	6.1000e-004	0.0000	6.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124	0.0116	0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289
Total	0.0264	0.2572	0.2059	3.9000e-004	4.0000e-003	0.0124	0.0164	6.1000e-004	0.0116	0.0122	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289

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3.2 Demolition - 2022

Unmitigated Construction Off-Site

Category	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
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e-004	3.4000e-004	3.5200e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9834	0.9834	2.0000e-005	0.0000	0.9840
Total	5.1000e-004	3.4000e-004	3.5200e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9834	0.9834	2.0000e-005	0.0000	0.9840

Mitigated Construction On-Site

Category	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
Fugitive Dust					1.8000e-003	0.0000	1.8000e-003	2.7000e-004	0.0000	2.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289
Total	0.0264	0.2572	0.2059	3.9000e-004	1.8000e-003	0.0124	0.0142	2.7000e-004	0.0116	0.0118	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289

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3.2 Demolition - 2022**Mitigated Construction Off-Site**

Category	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
tons/yr																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e-004	3.4000e-004	3.5200e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9834	0.9834	2.0000e-005	0.0000	0.9840
Total	5.1000e-004	3.4000e-004	3.5200e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9834	0.9834	2.0000e-005	0.0000	0.9840
MT/yr																

3.3 Site Preparation - 2022**Unmitigated Construction On-Site**

Category	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
tons/yr																
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0159	0.1654	0.0985	1.9000e-004		8.0600e-003	8.0600e-003	7.4200e-003	7.4200e-003	7.4200e-003	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	0.0159	0.1654	0.0985	1.9000e-004	0.0903	8.0600e-003	8.0984	0.0497	7.4200e-003	0.0571	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
MT/yr																

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3.3 Site Preparation - 2022**Unmitigated Construction Off-Site**

Category	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
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.1000e-004	2.1100e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5900	0.5900	1.0000e-005	0.0000	0.5904
Total	3.1000e-004	2.1000e-004	2.1100e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5900	0.5900	1.0000e-005	0.0000	0.5904

Mitigated Construction On-Site

Category	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
	tons/yr										MT/yr					
Fugitive Dust					0.0407	0.0000	0.0407	0.0223	0.0000	0.0223	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0159	0.1654	0.0985	1.9000e-004		8.0600e-003	8.0600e-003		7.4200e-003	7.4200e-003	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	0.0159	0.1654	0.0985	1.9000e-004	0.0407	8.0600e-003	0.0487	0.0223	7.4200e-003	0.0298	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549

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3.3 Site Preparation - 2022**Mitigated Construction Off-Site**

Category	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
tons/yr																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.1000e-004	2.1100e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5900	0.5900	1.0000e-005	0.0000	0.5904
Total	3.1000e-004	2.1000e-004	2.1100e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5900	0.5900	1.0000e-005	0.0000	0.5904
MT/yr																

3.4 Grading - 2022**Unmitigated Construction On-Site**

Category	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
tons/yr																
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0195	0.2086	0.1527	3.0000e-004		9.4100e-003	9.4100e-003	8.6600e-003		8.6600e-003	0.0000	26.0548	26.0548	8.4300e-003	0.0000	26.2654
Total	0.0195	0.2086	0.1527	3.0000e-004	0.0655	9.4100e-003	0.0749	0.0337	8.6600e-003	0.0423	0.0000	26.0548	26.0548	8.4300e-003	0.0000	26.2654
MT/yr																

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3.4 Grading - 2022**Unmitigated Construction Off-Site**

Category	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
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e-004	3.4000e-004	3.5200e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9834	0.9834	2.0000e-005	0.0000	0.9840
Total	5.1000e-004	3.4000e-004	3.5200e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9834	0.9834	2.0000e-005	0.0000	0.9840

Mitigated Construction On-Site

Category	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
	tons/yr										MT/yr					
Fugitive Dust	0.0195	0.2086	0.1527	3.0000e-004	0.0295	0.0000	0.0295	0.0152	0.0000	0.0152	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0195	0.2086	0.1527	3.0000e-004	0.0295	0.0000	0.0295	0.0152	0.0000	0.0152	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0195	0.2086	0.1527	3.0000e-004	0.0295	0.0000	0.0295	0.0152	0.0000	0.0152	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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3.4 Grading - 2022**Mitigated Construction Off-Site**

Category	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
tons/yr											MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e-004	3.4000e-004	3.5200e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9834	0.9834	2.0000e-005	0.0000	0.9840
Total	5.1000e-004	3.4000e-004	3.5200e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9834	0.9834	2.0000e-005	0.0000	0.9840

3.5 Building Construction - 2022**Unmitigated Construction On-Site**

Category	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
tons/yr											MT/yr					
Off-Road	0.1246	1.1399	1.1945	1.9700e-003		0.0591	0.0591		0.0556	0.0556	0.0000	169.1594	169.1594	0.0405	0.0000	170.1726
Total	0.1246	1.1399	1.1945	1.9700e-003		0.0591	0.0591		0.0556	0.0556	0.0000	169.1594	169.1594	0.0405	0.0000	170.1726

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3.5 Building Construction - 2022**Unmitigated Construction Off-Site**

Category	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
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0900e-003	0.2667	0.0535	7.3000e-004	0.0174	6.9000e-004	0.0181	5.0200e-003	6.6000e-004	5.6800e-003	0.0000	69.2783	69.2783	3.9200e-003	0.0000	69.3763
Worker	0.0227	0.0152	0.1560	4.8000e-004	0.0529	3.4000e-004	0.0533	0.0141	3.1000e-004	0.0144	0.0000	43.5507	43.5507	1.0300e-003	0.0000	43.5765
Total	0.0308	0.2819	0.2095	1.2100e-003	0.0703	1.0300e-003	0.0713	0.0191	9.7000e-004	0.0201	0.0000	112.8290	112.8290	4.9500e-003	0.0000	112.9528

Mitigated Construction On-Site

Category	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
	tons/yr										MT/yr					
Off-Road	0.1246	1.1399	1.1945	1.9700e-003		0.0591	0.0591		0.0556	0.0556	0.0000	169.1592	169.1592	0.0405	0.0000	170.1724
Total	0.1246	1.1399	1.1945	1.9700e-003		0.0591	0.0591		0.0556	0.0556	0.0000	169.1592	169.1592	0.0405	0.0000	170.1724

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3.5 Building Construction - 2022**Mitigated Construction Off-Site**

Category	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
tons/yr																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0900e-003	0.2667	0.0535	7.3000e-004	0.0174	6.9000e-004	0.0181	5.0200e-003	6.6000e-004	5.6800e-003	0.0000	69.2783	69.2783	3.9200e-003	0.0000	69.3763
Worker	0.0227	0.0152	0.1560	4.8000e-004	0.0529	3.4000e-004	0.0533	0.0141	3.1000e-004	0.0144	0.0000	43.5507	43.5507	1.0300e-003	0.0000	43.5765
Total	0.0308	0.2819	0.2095	1.2100e-003	0.0703	1.0300e-003	0.0713	0.0191	9.7000e-004	0.0201	0.0000	112.8290	112.8290	4.9500e-003	0.0000	112.9528

3.5 Building Construction - 2023**Unmitigated Construction On-Site**

Category	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
tons/yr																
Off-Road	0.0661	0.6042	0.6823	1.1300e-003		0.0294	0.0294		0.0277	0.0277	0.0000	97.3580	97.3580	0.0232	0.0000	97.9370
Total	0.0661	0.6042	0.6823	1.1300e-003		0.0294	0.0294		0.0277	0.0277	0.0000	97.3580	97.3580	0.0232	0.0000	97.9370

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3.5 Building Construction - 2023**Unmitigated Construction Off-Site**

Category	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
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3000e-003	0.1191	0.0259	4.1000e-004	9.9900e-003	1.2000e-004	0.0101	2.8900e-003	1.2000e-004	3.0000e-003	0.0000	38.8966	38.8966	1.5800e-003	0.0000	38.9361
Worker	0.0122	7.8100e-003	0.0818	2.7000e-004	0.0304	1.9000e-004	0.0306	8.0900e-003	1.7000e-004	8.2700e-003	0.0000	24.1241	24.1241	5.3000e-004	0.0000	24.1373
Total	0.0155	0.1269	0.1077	6.8000e-004	0.0404	3.1000e-004	0.0407	0.0110	2.9000e-004	0.0113	0.0000	63.0207	63.0207	2.1100e-003	0.0000	63.0734

Mitigated Construction On-Site

Category	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
Off-Road	0.0661	0.6042	0.6823	1.1300e-003		0.0294	0.0294		0.0277	0.0277	0.0000	97.3579	97.3579	0.0232	0.0000	97.9369
Total	0.0661	0.6042	0.6823	1.1300e-003		0.0294	0.0294		0.0277	0.0277	0.0000	97.3579	97.3579	0.0232	0.0000	97.9369

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3.5 Building Construction - 2023**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3000e-003	0.1191	0.0259	4.1000e-004	9.9900e-003	1.2000e-004	0.0101	2.8900e-003	1.2000e-004	3.0000e-003	0.0000	38.8966	38.8966	1.5800e-003	0.0000	38.9361
Worker	0.0122	7.8100e-003	0.0818	2.7000e-004	0.0304	1.9000e-004	0.0306	8.0900e-003	1.7000e-004	8.2700e-003	0.0000	24.1241	24.1241	5.3000e-004	0.0000	24.1373
Total	0.0155	0.1269	0.1077	6.8000e-004	0.0404	3.1000e-004	0.0407	0.0110	2.9000e-004	0.0113	0.0000	63.0207	63.0207	2.1100e-003	0.0000	63.0734

3.6 Paving - 2023**Unmitigated Construction On-Site**

Category	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
tons/yr											MT/yr					
Off-Road	9.1800e-003	0.0879	0.1219	1.9000e-004		4.3600e-003	4.3600e-003		4.0300e-003	4.0300e-003	0.0000	16.3786	16.3786	5.1500e-003	0.0000	16.5072
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.1800e-003	0.0879	0.1219	1.9000e-004		4.3600e-003	4.3600e-003		4.0300e-003	4.0300e-003	0.0000	16.3786	16.3786	5.1500e-003	0.0000	16.5072

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3.6 Paving - 2023**Unmitigated Construction Off-Site**

Category	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
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-004	4.1000e-004	4.2800e-003	1.0000e-005	1.5900e-003	1.0000e-005	1.6000e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.2624	1.2624	3.0000e-005	0.0000	1.2631
Total	6.4000e-004	4.1000e-004	4.2800e-003	1.0000e-005	1.5900e-003	1.0000e-005	1.6000e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.2624	1.2624	3.0000e-005	0.0000	1.2631

Mitigated Construction On-Site

Category	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
	tons/yr										MT/yr					
Off-Road	9.1800e-003	0.0879	0.1219	1.9000e-004		4.3600e-003	4.3600e-003		4.0300e-003	4.0300e-003	0.0000	16.3786	16.3786	5.1500e-003	0.0000	16.5072
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.1800e-003	0.0879	0.1219	1.9000e-004		4.3600e-003	4.3600e-003		4.0300e-003	4.0300e-003	0.0000	16.3786	16.3786	5.1500e-003	0.0000	16.5072

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3.6 Paving - 2023**Mitigated Construction Off-Site**

Category	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
tons/yr											MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-004	4.1000e-004	4.2800e-003	1.0000e-005	1.5900e-003	1.0000e-005	1.6000e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.2624	1.2624	3.0000e-005	0.0000	1.2631
Total	6.4000e-004	4.1000e-004	4.2800e-003	1.0000e-005	1.5900e-003	1.0000e-005	1.6000e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.2624	1.2624	3.0000e-005	0.0000	1.2631

3.7 Architectural Coating - 2023**Unmitigated Construction On-Site**

Category	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
tons/yr											MT/yr					
Archit. Coating	0.5067					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	0.5087	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571

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3.7 Architectural Coating - 2023**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7000e-004	3.7000e-004	3.8500e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1361	1.1361	2.0000e-005	0.0000	1.1368
Total	5.7000e-004	3.7000e-004	3.8500e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1361	1.1361	2.0000e-005	0.0000	1.1368

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5067					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	0.5087	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571

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3.7 Architectural Coating - 2023**Mitigated Construction Off-Site**

Category	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
tons/yr											MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7000e-004	3.7000e-004	3.8500e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1361	1.1361	2.0000e-005	0.0000	1.1368
Total	5.7000e-004	3.7000e-004	3.8500e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1361	1.1361	2.0000e-005	0.0000	1.1368

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

- Increase Diversity
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

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Category	tons/yr										MT/yr						
	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	
Mitigated	1.4673	8.0047	9.3490	0.0293	1.6954	0.0202	1.7156	0.4544	0.0188	0.4732	0.0000	2,710.509 2	2,710.509 2	0.1944	0.0000	2,715.368 6	
Unmitigated	1.5451	8.5857	11.2282	0.0386	2.5279	0.0264	2.5543	0.6775	0.0246	0.7021	0.0000	3,568.201 9	3,568.201 9	0.2159	0.0000	3,573.599 6	

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
Automobile Care Center	503.00	718.00	718.00	472,186	316,684	316,684	316,684
Convenience Market With Gas Pumps	3,179.46	5,445.72	4444.62	1,976,084	1,325,312	1,325,312	1,325,312
Fast Food Restaurant with Drive Thru	1,349.45	1,963.92	1476.20	1,359,757	911,956	911,956	911,956
High Turnover (Sit Down Restaurant)	678.98	845.70	704.03	819,582	549,674	549,674	549,674
Hotel	1,151.97	1,154.79	838.95	2,104,469	1,411,417	1,411,417	1,411,417
Total	6,862.85	10,128.13	8,181.79	6,732,079	4,515,044	4,515,044	4,515,044

4.3 Trip Type Information

Land Use	Miles					Trip %				Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by	Primary	Diverted	Pass-by
Automobile Care Center	9.50	7.30	7.30	33.00	48.00	19.00	21	28	51	21	28	51
Convenience Market With Gas	9.50	7.30	7.30	0.80	80.20	19.00	14	21	65	14	21	65
Fast Food Restaurant with Drive Thru	9.50	7.30	7.30	2.20	78.80	19.00	29	21	50	29	21	50
High Turnover (Sit Down Restaurant)	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43	37	20	43
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4	58	38	4

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4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.561380	0.091332	0.184829	0.116141	0.016642	0.004535	0.016185	0.000000	0.001192	0.001407	0.004983	0.000606	0.000767
Convenience Market With Gas Pumps	0.561380	0.034626	0.184829	0.116141	0.016642	0.004535	0.016185	0.056706	0.001192	0.001407	0.004983	0.000606	0.000767
Fast Food Restaurant with Drive Thru	0.561380	0.034626	0.184829	0.116141	0.016642	0.004535	0.016185	0.056706	0.001192	0.001407	0.004983	0.000606	0.000767
High Turnover (Sit Down Restaurant)	0.561380	0.034626	0.184829	0.116141	0.016642	0.004535	0.016185	0.056706	0.001192	0.001407	0.004983	0.000606	0.000767
Hotel	0.561380	0.034626	0.184829	0.116141	0.016642	0.004535	0.016185	0.056706	0.001192	0.001407	0.004983	0.000606	0.000767

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	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
tons/yr																
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	483.1375	483.1375	0.0219	4.5200e-003	485.0306
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	483.1375	483.1375	0.0219	4.5200e-003	485.0306
Natural Gas Mitigated	0.0346	0.3145	0.2641	1.8900e-003		0.0239	0.0239		0.0239	0.0239	0.0000	342.3152	342.3152	6.5600e-003	6.2800e-003	344.3494
Natural Gas Unmitigated	0.0346	0.3145	0.2641	1.8900e-003		0.0239	0.0239		0.0239	0.0239	0.0000	342.3152	342.3152	6.5600e-003	6.2800e-003	344.3494

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5.2 Energy by Land Use - NaturalGas**Unmitigated**

Land Use	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Biogenic CO2	Net Biogenic CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	18640	1.0000e-004	9.1000e-004	7.7000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.9947	0.9947	2.0000e-005	2.0000e-005	1.0006
Convenience Market With Gas Pumps	44038.8	2.4000e-004	2.1600e-003	1.8100e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	2.3501	2.3501	5.0000e-005	4.0000e-005	2.3640
Fast Food Restaurant with Drive Thru	297595	1.6000e-003	0.0146	0.0123	9.0000e-005		1.1100e-003	1.1100e-003		1.1100e-003	1.1100e-003	0.0000	15.8808	15.8808	3.0000e-004	2.9000e-004	15.9752
High Turnover (Sit Down Restaurant)	584031	3.1500e-003	0.0286	0.0241	1.7000e-004		2.1800e-003	2.1800e-003		2.1800e-003	2.1800e-003	0.0000	31.1661	31.1661	6.0000e-004	5.7000e-004	31.3513
Hotel	5.47044e+006	0.0295	0.2682	0.2253	1.6100e-003		0.0204	0.0204		0.0204	0.0204	0.0000	291.9235	291.9235	5.6000e-003	5.3500e-003	293.6582
Total		0.0346	0.3145	0.2641	1.8900e-003		0.0239	0.0239		0.0239	0.0239	0.0000	342.3152	342.3152	6.5700e-003	6.2700e-003	344.3494

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5.2 Energy by Land Use - NaturalGas**Mitigated**

Land Use	NaturalGas Use kBtu/yr	ROG	NOx	CO	SO2	tons/yr					MT/yr					
						Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O
Automobile Care Center	18640	1.0000e-004	9.1000e-004	7.7000e-004	1.0000e-005		7.0000e-005	7.0000e-005	7.0000e-005	0.0000	0.9947	0.9947	2.0000e-005	2.0000e-005	2.0000e-005	1.0006
Convenience Market With Gas Pumps	44038.8	2.4000e-004	2.1600e-003	1.8100e-003	1.0000e-005		1.6000e-004	1.6000e-004	1.6000e-004	0.0000	2.3501	2.3501	5.0000e-005	5.0000e-005	4.0000e-005	2.3640
Fast Food Restaurant with Drive Thru	297595	1.6000e-003	0.0146	0.0123	9.0000e-005		1.1100e-003	1.1100e-003	1.1100e-003	0.0000	15.8808	15.8808	3.0000e-004	3.0000e-004	2.9000e-004	15.9752
High Turnover (Sit Down Restaurant)	584031	3.1500e-003	0.0286	0.0241	1.7000e-004		2.1800e-003	2.1800e-003	2.1800e-003	0.0000	31.1661	31.1661	6.0000e-004	6.0000e-004	5.7000e-004	31.3513
Hotel	5.47044e+006	0.0295	0.2682	0.2253	1.6100e-003		0.0204	0.0204	0.0204	0.0000	291.9235	291.9235	5.6000e-003	5.6000e-003	5.3500e-003	293.6582
Total		0.0346	0.3145	0.2641	1.8900e-003		0.0239	0.0239	0.0239	0.0000	342.3152	342.3152	6.5700e-003	6.5700e-003	6.2700e-003	344.3494

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5.3 Energy by Land Use - Electricity**Unmitigated**

Land Use	Electricity Use kWh/yr	Total CO2	CH4	N2O	CO2e
MT/yr					
Automobile Care Center	8450	2.4582	1.1000e-004	2.0000e-005	2.4678
Convenience Market With Gas Pumps	44377.6	12.9099	5.8000e-004	1.2000e-004	12.9605
Fast Food Restaurant with Drive Thru	85272	24.8066	1.1200e-003	2.3000e-004	24.9038
High Turnover (Sit Down Restaurant)	167346	48.6830	2.2000e-003	4.6000e-004	48.8737
Hotel	1.35533e+006	394.2798	0.0178	3.6900e-003	395.8247
Total		483.1375	0.0218	4.5200e-003	485.0306

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5.3 Energy by Land Use - Electricity**Mitigated**

Land Use	Electricity Use kWh/yr	Total CO2	CH4	N2O	CO2e
MT/yr					
Automobile Care Center	8450	2.4582	1.1000e-004	2.0000e-005	2.4678
Convenience Market With Gas Pumps	44377.6	12.9099	5.8000e-004	1.2000e-004	12.9605
Fast Food Restaurant with Drive Thru	85272	24.8066	1.1200e-003	2.3000e-004	24.9038
High Turnover (Sit Down Restaurant)	167346	48.6830	2.2000e-003	4.6000e-004	48.8737
Hotel	1.35533e+006	394.2798	0.0178	3.6900e-003	395.8247
Total		483.1375	0.0218	4.5200e-003	485.0306

6.0 Area Detail**6.1 Mitigation Measures Area**

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Category	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
tons/yr																
Mitigated	0.9005	1.0000e-005	1.4100e-003	0.0000		1.0000e-005	1.0000e-005	1.0000e-005	1.0000e-005	1.0000e-005	0.0000	2.7500e-003	2.7500e-003	1.0000e-005	0.0000	2.9300e-003
Unmitigated	0.9005	1.0000e-005	1.4100e-003	0.0000		1.0000e-005	1.0000e-005	1.0000e-005	1.0000e-005	1.0000e-005	0.0000	2.7500e-003	2.7500e-003	1.0000e-005	0.0000	2.9300e-003
MT/yr																

6.2 Area by SubCategory

Unmitigated

SubCategory	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
tons/yr																
Architectural Coating	0.0507					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.8497					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.3000e-004	1.0000e-005	1.4100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7500e-003	2.7500e-003	1.0000e-005	0.0000	2.9300e-003
Total	0.9005	1.0000e-005	1.4100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7500e-003	2.7500e-003	1.0000e-005	0.0000	2.9300e-003
MT/yr																

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6.2 Area by SubCategory**Mitigated**

SubCategory	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
Architectural Coating	0.0507					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.8497					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.3000e-004	1.0000e-005	1.4100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7500e-003	2.7500e-003	1.0000e-005	0.0000	2.9300e-003
Total	0.9005	1.0000e-005	1.4100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7500e-003	2.7500e-003	1.0000e-005	0.0000	2.9300e-003

7.0 Water Detail**7.1 Mitigation Measures Water**

Apply Water Conservation Strategy

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	10.3144	0.1671	4.0200e-003	15.6898
Unmitigated	12.8930	0.2089	5.0200e-003	19.6122

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7.2 Water by Land Use**Unmitigated**

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
	Mgal	MT/yr			
Automobile Care Center	0.0940811	0.2367	3.0700e-003	7.0000e-005	0.3357
Convenience Market With Gas Pumps	0.0576626	0.7006	9.1000e-003	2.2000e-004	0.9937
Fast Food Restaurant with Drive Thru	0.278513	1.6152	0.0270	6.5000e-004	2.4824
High Turnover (Sit Down Restaurant)	0.825612	3.1710	0.0529	1.2700e-003	4.8735
Hotel	0.0526988	7.1696	0.1168	2.8100e-003	10.9270
	0.162087				
	0.10346				
	3.57671				
	0.397413				
Total		12.8930	0.2089	5.0200e-003	19.6122

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7.2 Water by Land Use**Mitigated**

Land Use	Indoor/Outdoor Use	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
	Mgal	MT/yr			
Automobile Care Center	0.0762649	0.1893	2.4600e-003	6.0000e-005	0.2685
Convenience Market With Gas Pumps	0.0461301				
	0.22281	0.5605	7.2800e-003	1.8000e-004	0.7950
Fast Food Restaurant with Drive Thru	0.136561				
	0.660489	1.2922	0.0216	5.2000e-004	1.9859
High Turnover (Sit Down Restaurant)	0.0421589				
	1.2967	2.5368	0.0424	1.0200e-003	3.8988
Hotel	0.0827678				
	2.86137	5.7356	0.0935	2.2500e-003	8.7416
	0.31793				
Total		10.3144	0.1671	4.0300e-003	15.6898

8.0 Waste Detail**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

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Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	9.5000	0.5614	0.0000	23.5358
Unmitigated	37.9999	2.2457	0.0000	94.1432

8.2 Waste by Land UseUnmitigated

Land Use	Waste Disposed tons	Total CO2	CH4	N2O	CO2e
Automobile Care Center	3.82	0.7754	0.0458	0.0000	1.9211
Convenience Market With Gas Pumps	11.3	2.2938	0.1356	0.0000	5.6828
Fast Food Restaurant with Drive Thru	31.33	6.3597	0.3759	0.0000	16.7559
High Turnover (Sit Down Restaurant)	63.55	12.9001	0.7624	0.0000	31.9594
Hotel	77.2	15.6709	0.9261	0.0000	38.8240
Total		37.9999	2.2457	0.0000	94.1432

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8.2 Waste by Land Use**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	0.955	0.1939	0.0115	0.0000	0.4803
Convenience Market With Gas Pumps	2.825	0.5735	0.0339	0.0000	1.4207
Fast Food Restaurant with Drive Thru	7.8325	1.5899	0.0940	0.0000	3.9390
High Turnover (Sit Down Restaurant)	15.8875	3.2250	0.1906	0.0000	7.9899
Hotel	19.3	3.9177	0.2315	0.0000	9.7060
Total		9.5000	0.5814	0.0000	23.5358

9.0 Operational Offroad

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

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

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

Equipment Type	Number
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11.0 Vegetation



FINAL TECHNICAL MEMORANDUM

To: Terry Farmer
BaseCamp Environmental, Inc.
Lodi, California

Date: March 25, 2019

From: Ray Kapahi *RK*
Environmental Permitting Specialists
Tel: 916-687-8352
E-Mail: ray.kapahi@gmail.com

Subject: Evaluation of Screening Level Health Risks for Proposed Gasoline and Diesel Dispensing Facility with Restaurant, Car Wash and Retail Store Stockton, CA

INTRODUCTION AND SUMMARY OF FINDINGS

Environmental Permitting Specialists (EPS) has completed a screening level health risk assessment (HRA) for the proposed gas station and related development in Stockton, California. The project will consist of an Arco gas station and convenience store, a Black Bear Diner, a Sonic restaurant/drive-in and a car wash. The Project will be located at 3928 East Hammer Lane in Stockton, CA (See Figure 1 for a vicinity map).

The construction and operation of the Project will release a variety of toxic air contaminants that can result in health risks to the public in the vicinity of the project. The most common of these emissions include diesel particulate (from idling of cars and trucks), benzene, xylene, and toluene (from gasoline dispensing and storage). Exposure to these compounds can lead to cancer and non-cancer health effects. The current analysis evaluates the potential health impacts from the operational (post construction) phase of the project. Construction impacts were outside the scope of the current analysis and were not completed.

A "Screening Level" health risk assessment refers to an assessment based on conservative estimates of exposure and emissions. The results of the analysis yield a "Risk Score" that can be

translated into being "High", "Medium" or "Low" risk. Risk scores above 10 signifies potentially significant impacts and that a more detailed and refined risk analysis is warranted.

The current HRA is based on the following project metrics and assumptions.

Table 1 Project Metrics and Assumptions	
Traffic Volume	3,688 vehicles/day 1,346,120 vehicles/year
Annual Amount of Gasoline Dispensed	4 million gallons
Annual Amount of Diesel Dispensed	145,000 gallons (3.6% of total fuel dispensed)
Annual Fuel Number of Deliveries	436 (based on 9,500 gallon delivery truck)
Idle Time per Fuel Delivery Truck	5 minutes

The results of the current screening level HRA indicates that public risk from exposure to toxic emissions from the Project would not be significant. The findings apply to both chronic and acute health effects. Chronic health effects include cancer risk and non-cancer health effects. Acute effects include non-cancer short-term health effects.

Technical details of the HRA are provided in the following sections.

ESTIMATE OF TOXIC EMISSIONS

The operation of a gasoline dispensing facility would result in emissions of toxic air contaminants. These are associated with gasoline dispensing, bulk fuel deliveries and idling of diesel cars and trucks. On the basis of recommendations by the California Air Resources Board and California Air Pollution Control Officers Association, the current HRA follows the recommended Guidelines¹ for determining TAC emissions. Emissions from idling cars and trucks are based on emission factors from ARB using the EMFAC model. These emissions are summarized in Table 2. Detailed emission calculations are provided in Attachment 1.

¹ CAPCOA Air Toxics "Hot Spots" Program. Gasoline Service Station Industrywide Risk Assessment Guidelines. November 1997.

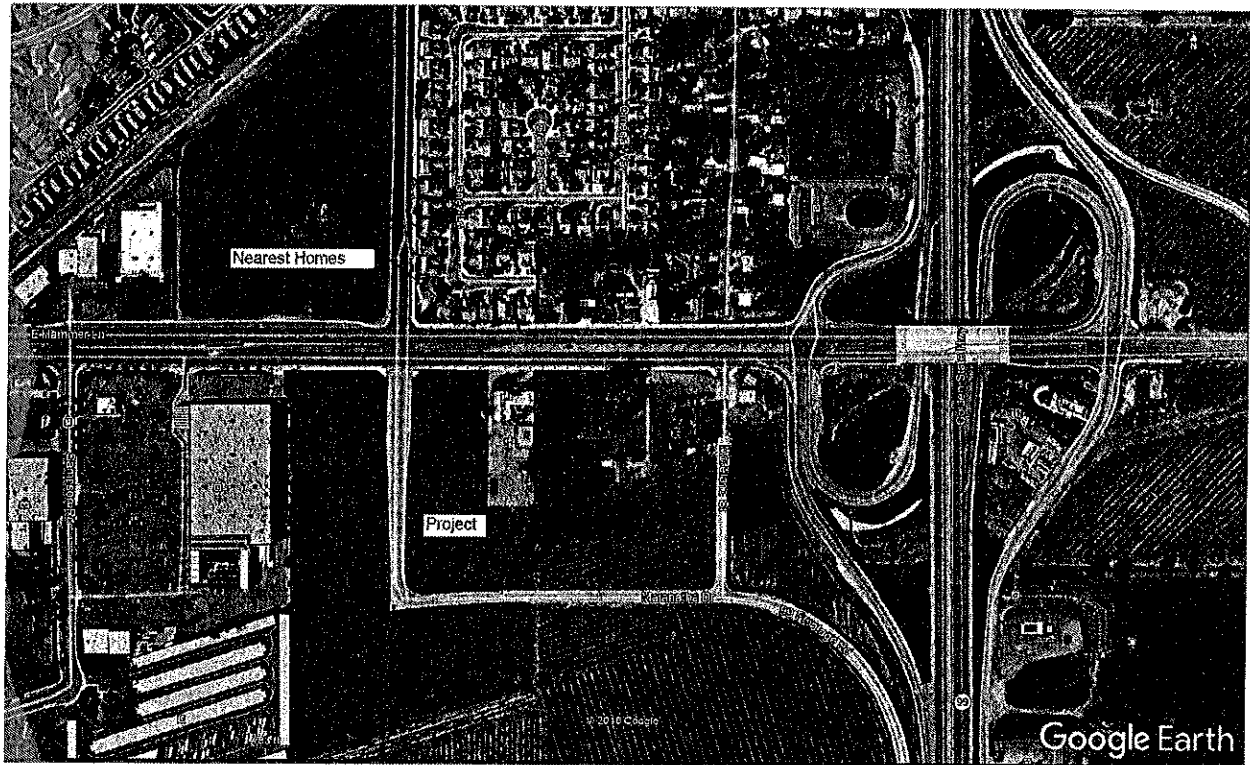
Table 2 Summary of Emissions of Toxic Air Contaminants		
TAC	Source	Emission rate (lbs/year)
Benzene	Gasoline Dispensing and Fuel Delivery	23.15
Diesel Particulate Matter (DPM)	Idling Cars and Trucks	0.58
Toluene	Gasoline Dispensing and Fuel Delivery	303.68
Xylene	Gasoline Dispensing and Fuel Delivery	91.1

EVALUATION OF HEALTH RISKS

Health risks associated with exposure to the TACs noted in Table 2 were evaluated using a screening level methodology based on AB-2588 (The Air Toxics and Health information Act). Using conservative exposure estimate (24/7 exposure for 30 years) and based on worst case meteorological data. This procedure yields a cancer and non-cancer risk score and a qualitative assessment of potential health risks (High, Medium or Low). The results are presented for various distances from the project site.

For the current project, the risk is considered "Medium" at nearest homes located approximately 275 feet from the project location (North of Hammer Lane). Risks at all other locations are also considered "Low". A designation of "High" risk indicates that there is a potential for significant health risks and that a more detailed risk assessment is needed to refine the risk estimate. For the current analysis, the project is not considered as High Risk, and therefore a detailed risk assessment is not required. A copy of the risk evaluation is provided in Attachment 2.

Figure 1
Project Vicinity



ATTACHMENTS

Attachment 1 – Detailed Emission Calculations

Attachment 2 – Screening Level HRA Results

Attachment 1

Table 1: DPM Emissions from Vehicle Idling

Table 2: DPM Emissions from Fuel Delivery Trucks

Table 3: VOC Emissions from Gasoline Dispensing

Table 4: Calculation of TACs from Gasoline
Dispensing

Table 5: Calculation of Number of Truck Deliveries

Calculation of DPM Emissions from Diesel Cars
(Assume 5 minutes Idle time per vehicle)

IDLING EMISSIONS	Units	
Annual # of Vehicles/year <i>(based on 3,688 veh/day)</i>	<i>vehicles/yr.</i>	1,346,120
% of Vehicles that are Diesel		3.6%
Number of Diesel Vehicles/year		48,460
Idle, Travel Time/Vehicle	<i>min</i>	5.0
Total Annual Idle Time	<i>min</i>	242,301.6
	<i>hours</i>	4,038.4
Emission Factor (50% of HD Truck Emissions, includes on-site vehicle travel)	<i>grams/vehicle-hr</i>	0.0636
Annual DPM Emissions	<i>grams/yr</i>	257
	<i>lbs/yr</i>	0.57

Table 2
Calculation of DPM Emissions from Idling Trucks
Based on 436 Deliveries/year

EXHIBIT 1 - Addendum

IDLING EMISSIONS - FUEL DELIVERY TRUCKS	Units	
Fuel Deliveries /year		436
Idle time/truck	min	5
Total Idle time/year	min	2,181.6
Idle time/yr	hrs	36.4
PM-2.5 Emission Factor for Vehicle Idling (Note 1) Assume PM-2.5 = DPM	(grams/veh-hr)	0.1272
Annual DPM emissions	grams/yr lbs/yr	4.625 0.0102

Note 1. Idle emission factor from ARB compilation for statewide analysis by calendar year and by air basin. Excerpts of ARB report shown below.

CY	EMFAC2007 Vehicle Cal	Fuel_Type	air_basin	season	HC (g/hr-veh)	CO (g/	NOX (g/	PM10	PM2.5
2019	HHD	D	SC	s	4.855426609	26.64777	51.59235	0.10149	0.093371
2019	HHD	D	SC	w	5.561933107	50.51624	47.76403	0.146491	0.134772
2019	HHD	D	SCC	a	5.05157589	35.46631	54.48831	0.16203	0.149067
2019	HHD	D	SCC	s	4.76063615	25.77128	56.24108	0.136592	0.125664
2019	HHD	D	SCC	w	5.453349817	48.85468	52.06782	0.197158	0.181386
2019	HHD	D	SD	a	5.149121068	36.61017	50.49086	0.124903	0.114911
2019	HHD	D	SD	s	4.852563324	26.60245	52.11505	0.105294	0.09687
2019	HHD	D	SD	w	5.558653189	50.43034	48.24794	0.151982	0.139823
2019	HHD	D	SF	a	5.14133871	36.51208	50.8305	0.128346	0.118078
2019	HHD	D	SF	s	4.845229182	26.53118	52.46561	0.108196	0.099541
2019	HHD	D	SF	w	5.550251866	50.29523	48.5725	0.156172	0.143678
2019	HHD	D	SJV	a	5.388520554	38.15542	47.66389	0.138247	0.127187
2019	HHD	D	SJV	s	5.078174871	27.7253	49.19714	0.116543	0.10722
2019	HHD	D	SJV	w	5.817093164	52.55892	45.54655	0.16822	0.154762
2019	HHD	D	SS	a	5.397414116	38.40064	46.50891	0.123145	0.113293
2019	HHD	D	SS	s	5.086556219	27.90349	48.005	0.103812	0.095507

Table 3
Calculation of VOC Emissions

EXHIBIT 1 - Addendum

Gasoline Dispensing Operations VOC Calculator

Applicability	Use this spreadsheet to calculate VOC emissions from gasoline dispensing operations. Entries required in yellow areas, output in grey areas.		
<i>Author or updater</i>	Matthew Cegielski	<i>Last Update</i>	January 25, 2017
Facility:	Hammar Petroleum		
ID#:	4,000,000 gallons dispensed annually		
Project #:			
Inputs	gal/day	gal/yr	Formula
	1.12E+04	4.00E+06	
	1,000 gal /hr	1,000 gal /yr	
Gasoline Throughput	4.68E-01	4.00E+03	Enter the change in gas station throughput in units of gallons/day and gallons/yr. Select the Phase I and Phase II type using the drop down provided. VOC emissions are calculated by the multiplication of Throughput Rates and Emission Factors.
Application Type	Type #		
EVR Phase I and EVR Phase II Installed Underground Tank	9		
Substances	lb VOC/ 1,000 gal	LB/HR	LB/YR
Vapor Tank Filling Loss VOC	0.08	3.93E-02	3.36E+02
Vehicle Refueling VOC	0.42	1.97E-01	1.68E+03
Breathing Loss VOC	0.03	1.17E-02	1.00E+02
Spillage VOC	0.42	1.97E-01	1.68E+03
Total VOC	0.95	4.44E-01	3.80E+03
References:			
* The emission factors are derived from Appendix A in the 1997 CAPCOA Air Toxics "Hot Spots" Program document, <i>Gasoline Service Station Industrywide Risk Assessment Guidelines</i> .			

Table 4
Calculation of TACs from Gasoline Dispensing and Spillage
Basis: 7.48 million Gallons/year Throughput

--- From CAPCOA/SJVAPCD Spreadsheet ---
VOC Emissions Based on 7.48 million gallons/yr

	lbs/yr	lbs/hr
Tank Filling	3.36E+02	
Vehicle Re-Fueling	1.68E+03	
Breathing Losses	1.00E+02	
Spillage	1.68E+03	
Amt of VOC (From Gasoline Dispensing, etc.)	2.12E+03	2.48E-01
Amt of VOCs (From Gasoline Spillage)	1.68E+03	1.97E-01

TACs from Tank Filling	EF (lbs/lb VOC)	Emissions (lbs/yr)	Emissions (Lbs/hr)
Benzene	3.00E-03	1.01E+00	
Ethyl Benzene	1.60E-02	5.38E+00	
Toluene	8.00E-02	2.69E+01	
Xylenes	2.40E-02	8.06E+00	

TACs from Vehicle Re-fuelling	EF (lbs/lb VOC)	Emissions (lbs/yr)	Emissions (Lbs/hr)
Benzene	3.00E-03	5.04E+00	
Ethyl Benzene	1.60E-02	2.69E+01	
Toluene	8.00E-02	1.34E+02	
Xylenes	2.40E-02	4.03E+01	

TACs from Breathing Losses	EF (lbs/lb VOC)	Emissions (lbs/yr)	Emissions (Lbs/hr)
Benzene	3.00E-03	3.00E-01	
Ethyl Benzene	1.60E-02	1.60E+00	
Toluene	8.00E-02	8.00E+00	
Xylenes	2.40E-02	2.40E+00	

TACs from Gasoline Spillage	EF (lbs/lb VOC)	Emissions (lbs/yr)	Emissions (Lbs/hr)
Benzene	1.00E-02	1.68E+01	
Ethyl Benzene	1.60E-02	2.69E+01	
Toluene	8.00E-02	1.34E+02	
Xylenes	2.40E-02	4.03E+01	

Summary of emissions from Gasoline				
Source	----- lbs/year -----			
	Benzene	Ethyl Benzene	Toluene	Xylenes
Tank Filling	1.01	5.38	26.88	8.06
Vehicle Re-Fuelling	5.04	26.88	134.40	40.32
Breathing Losses	0.30	1.60	8.00	2.40
Spillage	16.80	26.88	134.40	40.32
TOTAL	23.15	60.74	303.68	91.10

NOTES

1. VOC emission rates from CAPCOA/SJVAPCD spreadsheet (Table 3)
2. TAC Emission Factors from CAPCOA/SJVAPCD Speciation Profiles (copy attached)

Table 5
Calculation of Annual Fuel Deliveries

Annual Amount of Fuel Delivered

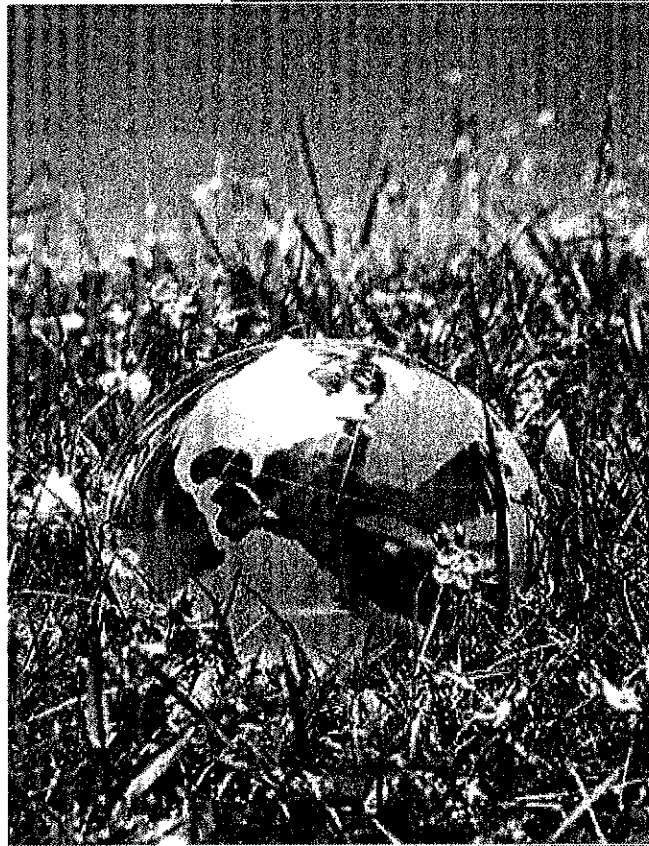
Gasoline	4,000,000	gallons/yr
Diesel	145,000	gallons/yr
TOTAL	4,145,000	gallons/yr
Gallons/Delivery Truck	9,500	gallons/truck
Number of Fuel Deliveries/year	436	fuel delivery trucks/yr

Speciation of VOCs from Gasoline Vapor and Liquid

Source: San Joaquin Valley APCD



AIR 2538: "Hot Spots" Air Toxics Profiles



March 27, 2017

AB 2588 "Hot Spots" Air Toxics Profiles
March 27, 2017

Z1 SU Gasoline Dispensing Op VOC Vapor Speciation

District Toxic Profile ID	128
Description	Z1 SU Gasoline Dispensing Op VOC Vapor Speciation
Source	The emission factors are derived from the table, "Content of Reformulated Gasoline", in the 1997 CAPCOA Air Toxics "Hot Spots" Program document, Gasoline Service Station Industrywide Risk Assessment Guidelines.

Pollutant Name	Emission Factor	Emission Factor Units	CAS#
Benzene	3.00E-03	lb/lb VOC	71432
Ethyl benzene	1.60E-02	lb/lb VOC	100414
Toluene	8.00E-02	lb/lb VOC	108883
Xylenes (mixed)	2.40E-02	lb/lb VOC	1330207

Z1 SU Gasoline Dispensing Op VOC Liquid Speciation

District Toxic Profile ID	261
Description	Z1 SU Gasoline Dispensing Op VOC Liquid Speciation
Source	The emission factors are derived from the table, "Content of Reformulated Gasoline", in the 1997 CAPCOA Air Toxics "Hot Spots" Program document, Gasoline Service Station Industrywide Risk Assessment Guidelines.

Pollutant Name	Emission Factor	Emission Factor Units	CAS#
Benzene	1.00E-02	lb/lb VOC	71432
Ethyl benzene	1.60E-02	lb/lb VOC	100414
Toluene	8.00E-02	lb/lb VOC	108883
Xylenes (mixed)	2.40E-02	lb/lb VOC	1330207

Attachment 2

Copy of Screening Level HRA Model Output

[illegible]

APPENDIX C
ARBORIST REPORT



GIANELLI CO.
CERTIFIED CONSULTING ARBORISTS

February 24, 2020

Charlie Simpson
BaseCamp Environmental, Inc.
115 S. School Street
Suite 14
Lodi, CA 95240

Dear Charlie:

On Monday, February 24, 2020, I visited the proposed hotel project site on Hammer Lane, Stockton, to evaluate the condition of two Heritage Oaks, Quercus lobata. I found two Oaks that are considered Heritage (protected) trees as described in the City of Stockton Tree Ordinance.

#1 tree (my tag #491) is a mature Valley Oak, Quercus lobata, with a bifurcated main trunk. The diameter of the tree at 24 inches above grade is 55 inches. The height is estimated at 80 feet with a spread of 75 feet. The retention value of this tree is considered to be "high".

#2 tree (my tag #492) is a semi mature Valley Oak, Quercus lobata, with a single trunk. The diameter of the tree at 24 inches above grade is 23 inches. The height is estimated at 45 feet with a spread of 30 feet. The retention value of this tree is also considered to be "high".

It is my opinion that extreme efforts should be considered in order to keep these trees alive. A recommended program of good

Tree Evaluation
Hotel Project Site on Hammer Lane, Stockton
February 24, 2020
Page 2

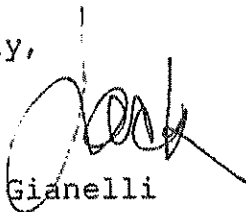
tree maintenance would be to remove all dead and dying wood in the canopy of the trees.

Notes:

Enclosed are the Criteria for Determining the Retention Value of Trees.

Enclosed are the photographs taken as the new foliage was emerging from dormancy.

Sincerely,



Jack B. Gianelli
Certified Consulting Arborist

JBG:bg

Enclosures

Gianelli Co

4303 Annandale Drive
Stockton, CA 95219

Phone # 462-7533

Fax # 451-0905

Date

Invoice #

2/24/2020

378

Bill To

BaseCamp Environmental, Inc.
115 S. School Street
Suite 14
Lodi CA 95240

Terms

Net 30

Description	Rate	Amount
Evaluation on February 24, 2020 of trees on the proposed hotel project site on Hammer Lane, Stockton.	325.00	325.00

Total**\$325.00**

From: Charlie Simpson csimpson@basecampenv.com
 Subject: Hotel Figures
 Date: Feb 21, 2020 at 4:04:07 PM
 To: Jack Gianelli gianellico@comcast.net

Hi Jack,

Attached are two figures for the hotel project we just discussed on the phone. The hotel site is outlined in blue on both sheets.

Please don't hesitate to call if you have any questions. Thanks for your help with this.

Charlie Simpson
 BaseCamp Environmental, Inc.
 115 S. School St, Suite 14
 Lodi, CA 95240
 209-224-8213

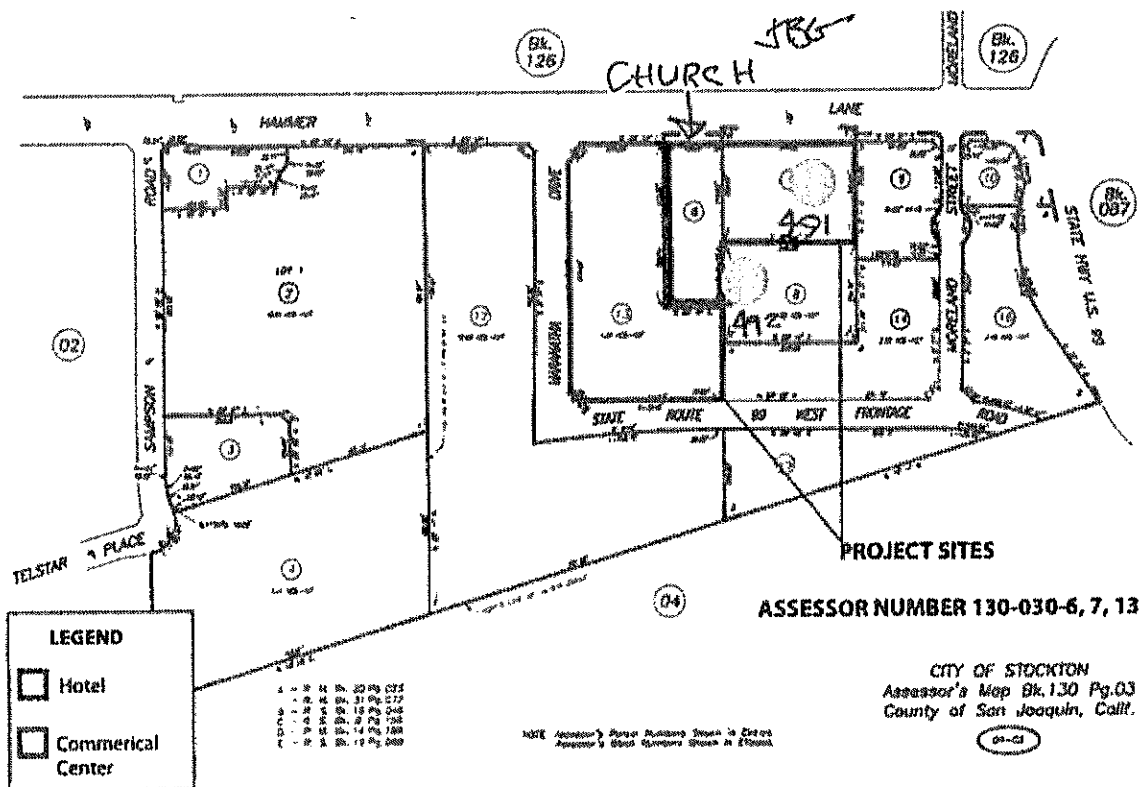


Figure 1-5
 ASSESSOR PARCEL MAP

CRITERIA FOR DETERMINING
THE RETENTION VALUE OF TREES

HIGH VALUE

TREES 491 & 492

EXCELLENT VIGOR, GOOD STRUCTURE, AND ± SYMMETRICAL
MINIMAL AMOUNT OF DEAD WOOD AND CROSSED BRANCHES IN THE CROWN
ROOT COLLAR AREA SOUND
MINIMAL AMOUNT OF DECAY IN CROWN AND/OR COLLAR
GOOD TAPER OF LATERALS
TRACE INFESTATION OF SERIOUS INSECT PESTS

MODERATE TO HIGH VALUE

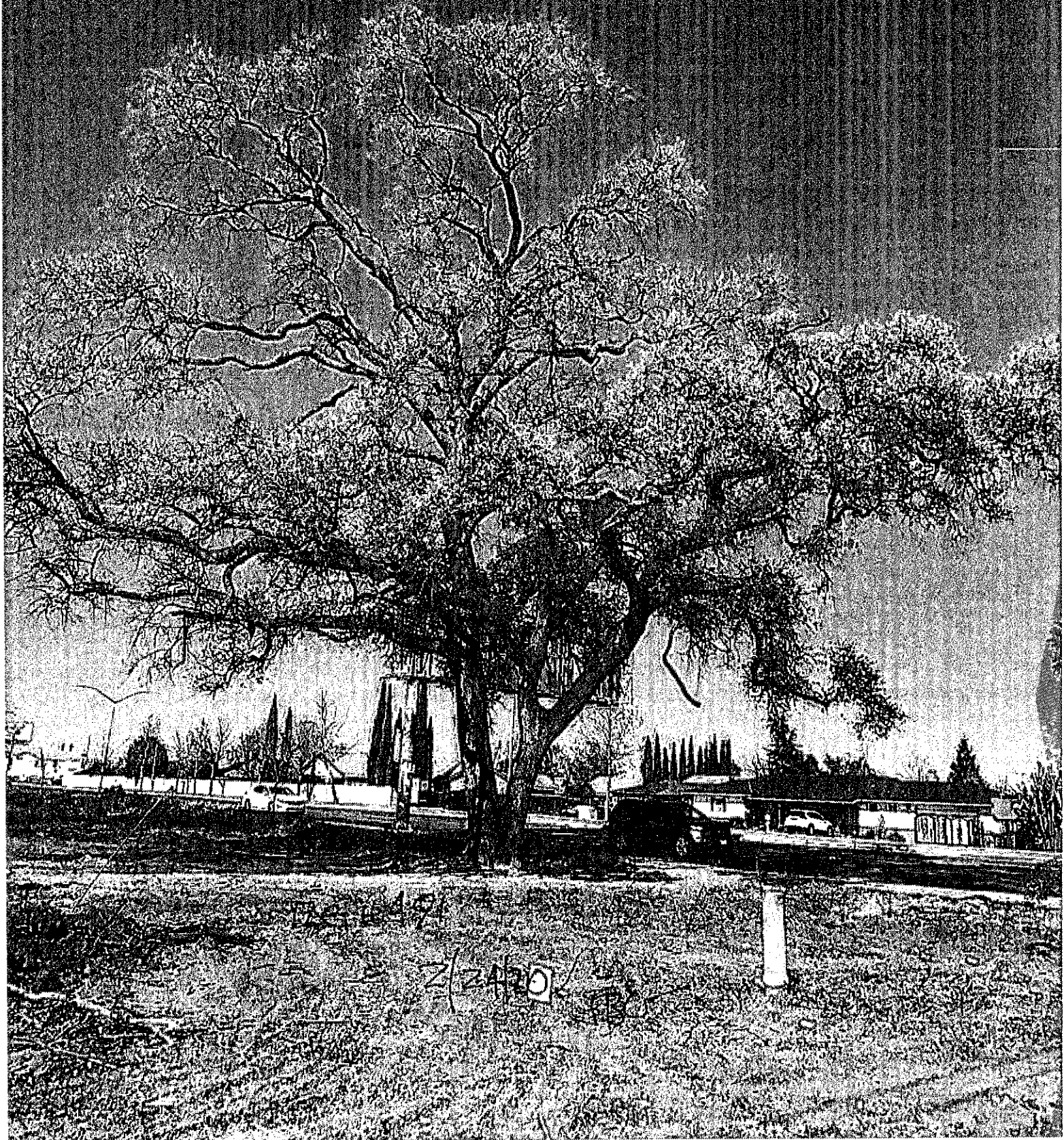
NORMAL VIGOR, FEW STRUCTURAL DEFECTS
MINIMAL AMOUNT OF DEAD WOOD AND DECAY IN CROWN
MINIMAL AMOUNT OF DECAY AT ROOT COLLAR
SOME REMEDIAL TREATMENT NEEDED FOR CULTURAL OR STRUCTURAL
PRESERVATION
LIGHT INFESTATION OF SERIOUS INSECT PESTS

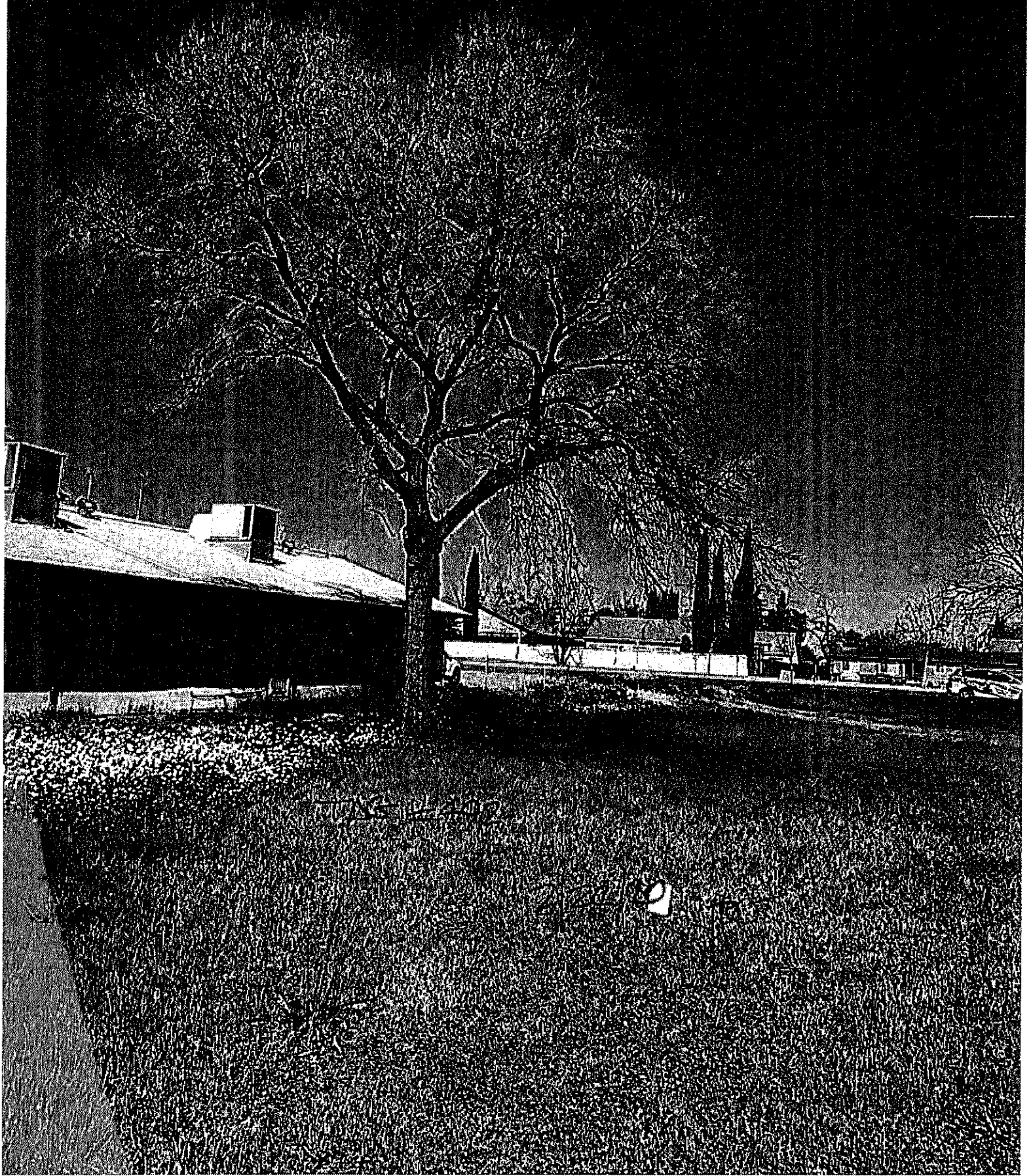
MODERATE VALUE

REDUCED VIGOR, SOME STRUCTURAL DEFECTS
SOME DEAD WOOD IN CROWN
OVERBALANCED, MISSHAPED
SOME DECAY DECAY PRESENT IN CROWN AND/OR COLLAR
EXTENSIVE REMEDIAL TREATMENT NEEDED FOR PRESERVATION
LIGHT INFESTATION OF SERIOUS INSECT PESTS

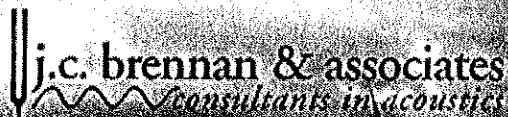
LOW VALUE

POOR VIGOR, STRUCTURALLY UNSOUND
EXTENSIVE DEAD WOOD PRESENT
EXTENSIVE DECAY PRESENT IN THE CROWN AND/OR COLLAR
MISSHAPED, OVERBALANCED
HEAVY INFESTATION OF SERIOUS INSECT PESTS





**APPENDIX D
NOISE ASSESSMENT**



Hammer Lane Annexation Environmental Noise Assessment

City of Stockton, California

January 16, 2020

Job Project # 2020-103

Prepared for:



Attn:

Mr. Charlie Simpson
115 S. School Street, Suite 14
Lodi, CA 95240

Prepared by:

j.c. brennan & associates, Inc.

Jim Brennan, INCE
President

Member, Institute of Noise Control Engineering (INCE)

INTRODUCTION

The project proposes to annex approximately eight acres currently in unincorporated San Joaquin County to the City of Stockton. The annexation area includes three parcels of land, along with a portion of the right-of-way of Hammer Lane.

Commercial Center Development Component

APN 130-030-13, a vacant parcel of approximately 4.34 acres, is proposed to be developed as a commercial center with four commercial buildings. The commercial center would consist of the following:

- An ARCO AM/PM fueling station and convenience store. The fueling station component would have eight dispensing pump stations with two dispensing nozzles each, for a total of 16 dispensing pumps. A canopy approximately 4,395 square feet in area would cover the dispensing pumps. The convenience store would be in a building approximately 3,764 square feet in floor area.
- A Sonic quick-serve restaurant. The Sonic building would have approximately 2,720 square feet of floor area for cooking and indoor dining. Customers would receive in-vehicle food service in two designated parking areas covered by canopies totaling 2,640 square feet in area.
- A Black Bear Diner sit-down restaurant. The Black Bear Diner building would have 5,338 square feet of floor area and 157 seats for indoor dining.
- An Elite Car Wash, a stand-alone, unattended carwash. The carwash would be a "tunnel" carwash, with a conveyor approximately 140 feet in length. The carwash also would provide 20 vacuum stations to the north and east of the main facility.

The commercial center would have a total of 173 parking spaces throughout the site. Access would be provided from an entry-only driveway off Hammer Lane, two driveways off Maranatha Drive, and one driveway off the SR 99 Frontage Road to the south.

Hotel Development Component

APNs 130-030-06 and 130-030-07, totaling approximately 3.7 acres, would be developed as a hotel. The hotel is anticipated to be a dual-brand hotel occupied by Fairfield Inn and Suites and by TownePlace Suites. The hotel building would have four stories and approximately 81,484 square feet of floor area.

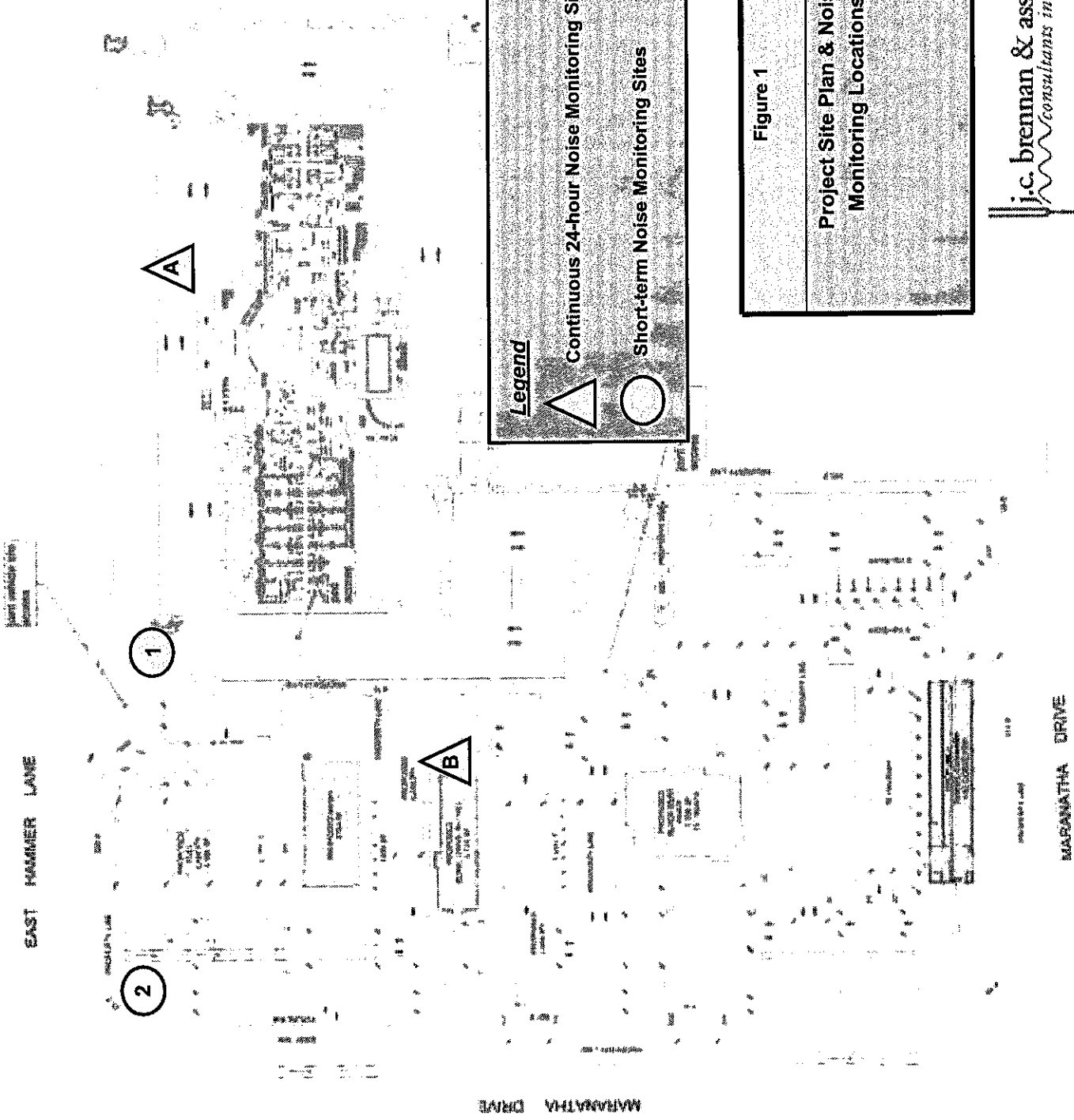
The hotel building would have 141 suites available for visitors. Fairfield Inn and Suites would occupy the western side of the building, with 81 suites available for short stays. TownePlace Suites would have the remaining 60 suites on the eastern side of the building. These suites would be available to extended-stay travelers. A pool would be installed outside this area to the south.

Access to the hotel would be provided from two entryways off Hammer Lane, including the entry-only driveway that also would be used by the adjacent commercial center. There also would be an access way between the commercial center and the south parking area for the

hotel. The hotel would have approximately 200 parking spaces, available on all sides of the hotel building.

This analysis evaluates the potential for the project to produce noise levels which may exceed the City of Stockton noise level criteria, and the potential for the project to be exposed to noise levels which exceed the City of Stockton noise level criteria.

Figure 1 shows the project site plan.



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 dB¹. 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.

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 to measure the ambient noise level 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 descriptors, L_{dn} and CNEL, and shows very good correlation with community response to noise.

The day/night average level (L_{dn}) and Community Noise Equivalent Level (CNEL) are 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, and in the case of CNEL a +4.77 dB decibel weighting applied to noise occurring during the evening period (7:00 p.m. to 10:00 p.m.). These penalties are based upon the assumption that people react to evening or nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} and CNEL represent a 24-hour average, it tends to disguise short-term variations in the noise environment.

¹ For an explanation of these terms, see Appendix A: "Acoustical Terminology"

It is important to note that the Ldn is universally accepted as a composite 24-hour noise level descriptor. The CNEL was developed by the State of California for evaluating aircraft operations. The Ldn and CNEL descriptors generally agree within less than 0.5 dBA.

Table 1 lists several examples of the noise levels associated with common noise sources.

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.

Table 1

LOUDNESS COMPARISON CHART (dBA)

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet Fly-over at 1000 ft	110	Rock Band
Gas Lawn Mower at 3 ft	100	
	90	Food Blender at 3 ft
Diesel Truck at 50 ft at 50 mph	80	Garbage Disposal at 3 ft
Noisy Urban Area, Daytime	70	Vacuum Cleaner at 10 ft
Gas Lawn Mower at 100 ft		Normal Speech at 3 ft
Commercial Area	60	Large Business Office
Heavy Traffic at 300 ft	50	Dishwasher Next Room
Quiet Urban, Daytime	40	Theater, Large Conference Room (Background)
Quiet Urban, Nighttime	30	Library
Quiet Suburban, Nighttime	20	Bedroom at Night, Concert Hall (Background)
	10	Broadcast/Recording Studio
Quiet Rural, Nighttime	0	
Lowest Threshold of Human Hearing		Lowest Threshold of Human Hearing

An increase of 3 dBA is barely perceptible to the human ear.

j.c. brennan & associates
consultants in acoustics

CRITERIA FOR ACCEPTABLE NOISE EXPOSURE

City of Stockton General Plan Noise Level Standards:

The City of Stockton adopted a new 2040 General Plan on December 4, 2018, which is in effect at this time. The relevant Goals and Policies are discussed below. In addition, the City of Stockton Development Code (Chapter 16 of the Municipal Code) establishes the noise performance standards shown in Table 3.

Policy SAF-2.5

Protect the community from health hazards and annoyance associated with excessive noise levels.

Action SAF-2.5A

Prohibit new commercial, industrial, or other noise generating land uses adjacent to existing sensitive noise receptors such as residential uses, schools, health care facilities, libraries, and churches if noise levels are expected to exceed 70 dBA Community Noise Equivalent (CNEL) when measured at the property line of the noise sensitive land use.

Action SAF-2.5B

Require projects that would locate noise sensitive land uses where the projected ambient noise level is greater than the "normally acceptable" noise level indicated on Table 5-1 to provide an acoustical analysis that shall:

- Be the responsibility of the applicant;
- Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics;
- Include representative noise level measurements with sufficient sampling periods and locations to adequately described local conditions;
- Estimate existing and projected (20-year) noise levels in terms of Ldn/CNEL and compare the levels to the adopted noise policies and actions in this General Plan;
- Recommend appropriate mitigation to achieve compatibility with the adopted noise policies and standards;
- Where the noise source in question consists of intermittent single events, address the effects of maximum noise levels in sleeping rooms in terms of possible sleep disturbance;
- Estimate noise exposure after the prescribed mitigation measures have been implemented;
- If the project does not comply with the adopted standards and policies of the General Plan, provide acoustical information for a statement of overriding considerations for the project; and
- Describe a post-project assessment program, which could be used to evaluate the effectiveness of the proposed mitigation measures.

Action SAF-2.5C

Require noise produced by commercial uses to not exceed 75 dB Ldn/CNEL at the nearest property line.

Action SAF-2.5D

Grant exceptions to the noise standards for commercial and industrial uses only if a recorded noise easement is conveyed by the affected property owners.

Action SAF-2.5E

Require all new habitable structures to be set back from railroad tracks to protect residents from noise, vibration, and safety impacts.

Table 2 (Table 5-1 of the Stockton General Plan)							
Land Use Type	Noise Levels (Ldn)						
	0-55	56-60	61-65	66-70	71-75	75-80	>81
Residential							
Urban Residential Infill							
Hotels, Motels							
Schools, Libraries, Churches, Hospitals, Extended Care Facilities							
Auditoriums, Concert Halls, Amphitheaters							
Sports Arenas, Outdoor Spectator Sports							
Playgrounds, Neighborhood Parks							
Golf Courses, Riding Stables, Water Recreation, Cemeteries							
Office Buildings, Business Commercial and Professional							
Mining, Industrial, Manufacturing, Utilities, Agriculture							
		Normally Acceptable. Specified land use is satisfactory, based on the assumption that any buildings involved are of normal, conventional construction, without any special noise insulation requirements.					
		Conditionally Acceptable. New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed insulation features have been included in the design.					
		Unacceptable. New construction or development should not be undertaken.					
If existing noise standards are currently exceeded, a proposed project shall not incrementally increase noise levels by more than 3 dBA							

City of Stockton Municipal Code:

The City of Stockton Municipal Code Chapter 16, Development Code contains performance standards for new developments, shown in Table 3. Noise affecting the proposed residential uses must be mitigated to the standards shown in Table 3 for stationary or non-transportation noise sources.

City of Stockton Noise Ordinance

The City of Stockton noise ordinance is codified in Chapter 16, Article III, Division 16-340 of the City's Municipal Code (City of Stockton, 2004). The following sections present prohibited activities and noise standards applicable to the project.

Activities Deemed Violations of This Division: The following acts are a violation of this Division and are therefore prohibited.

- A. **Construction noise.** Operating or causing the operation of tools or equipment on private property used in alteration, construction, demolition, drilling, or repair work between the hours of 10:00 p.m. and 7:00 a.m., so that the sound creates a noise disturbance across a residential property line, except for emergency work of public service utilities.

Standards: The following provisions shall apply to all uses and properties, as described below, and shall establish the City's standards concerning acceptable noise levels for both noise-sensitive land uses and for noise-generating land uses and transportation-related sources:

- B. **Standards for proposed noise-generating land uses and transportation-related sources.** Excluding noise-generating projects on infill sites, the following shall apply:

- 1. **Transportation-related noise sources (except infill sites).** Transportation-related projects that include the development of new transportation facilities or the expansion of existing transportation facilities shall be required to mitigate their noise levels so that the resulting noise:

- a. Does not adversely impact noise-sensitive land uses; and
- b. Does not exceed the standards in **Table 3.11-3, (Table 3 of this Report)** Part 1.

Noise levels shall be measured at the property line of the nearest site, which is occupied by, and/or zoned or designated to allow the development of, noise-sensitive land uses.

Table 3
(Table 3.11-3 of the Municipal Code)
MAXIMUM ALLOWABLE NOISE EXPOSURE FOR NOISE-SENSITIVE LAND USES

Noise-Sensitive Land Use Type Spaces	Outdoor Activity Areas	Indoor
Part I: Transportation-Related Noise Standards, Maximum Allowable Noise Exposure (Ldn dB)		
Residential (all types)	65	45
Child care	--	45
Educational facilities	--	45
Libraries and museums	--	45
Live-work facilities	65	45
Lodging	65	45
Medical services	--	45
Multi-use (with residential)	65	45
Noise Descriptor		
	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)

Part II: Land Use-Related Noise Standard, Outdoor

Hourly Equivalent Sound Level (Leq), dB	55	45
Maximum Sound Level (Lmax), dB	75	65

1. The noise standard shall be applied at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards shall be applied on the receiving side of noise barriers or other property line noise mitigation measures.

2. Each of the noise level standards specified shall be increased by 5 for impulse noise, simple tone noise, or noise consisting primarily of speech or music.

SOURCE: City of Stockton, 2004.

2. Commercial, industrial, and other land use-related noise sources (except infill sites).

a. **New and expanded noise sources.** Land use-related projects that will create new noise sources or expand existing noise sources shall be required to mitigate their noise levels so that the resulting noise:

1. Does not adversely impact noise-sensitive land uses; and
2. Does not exceed the standards specified in **Table 3.11-3, (Table 3 of this report) Part 2.**

Noise levels shall be measured at the property line of the nearest site which is occupied by, zoned for, and/or designated on the City's General Plan Diagram to allow the development of, noise-sensitive land uses.

b. **Maximum sound level.**

2. **Industrial.**

- a. The maximum sound level (Lmax) produced by industrial land uses or by other permitted noise-generating activities on any industrial

(IL, IG or PT) or public facilities (PF) zoning district shall not exceed 80 dB; and

b. The hourly equivalent sound level (L_{eq}) from these land uses shall not exceed 70 dB during daytime or nighttime hours as measured at the property line of any other adjoining IL, IG, PT, or PF district.

c. **Adjacent to other uses.** If commercial, industrial, or public facilities land uses are adjacent to any noise-sensitive land uses or vacant residential (RE, RL, RM, or RH) or open space (OS) zoning districts, these uses shall comply with the performance standards contained in Table 3.11-3 (Table 3 of this report) Part 2.

Determination of a Significant Increase in Noise Levels

Another means of determining a potential noise impact is to assess a person's reaction to changes in noise levels due to a project. Table 4 is commonly used to show expected public reaction to changes in environmental noise levels. This table was developed on the basis of test subjects' reactions to changes in the levels of steady-state pure tones or broad-band noise and to changes in levels of a given noise source. It is probably most applicable to noise levels in the range of 50 to 70 dBA, as this is the usual range of voice and interior noise levels.

Table 4 Subjective Reaction to Changes in Noise Levels of Similar Sources		
Change in Level, dBA	Subjective Reaction	Factor Change in Acoustical Energy
1	Imperceptible (Except for Tones)	1.3
3	Just Barely Perceptible	2.0
6	Clearly Noticeable	4.0
10	About Twice (or half) as Loud	10.0
Source: Architectural Acoustics, M. David Egan, 1988.		

EXISTING NOISE ENVIRONMENT

As a means of determining the typical background noise environment in the project vicinity, j.c. brennan & associates, Inc. conducted noise level measurements on November 14th, 2017 for a previous project proposed for the commercial portion of this site, and again on January 26-27, 2020. Both continuous 24-hour noise measurements and short term noise level measurements were conducted during each time frame. Noise measurements were conducted using Larson Davis Laboratories (LDL) Model 820 and 824 precision integrating sound level meters. The equipment was calibrated before and after use using an LDL Model 200 acoustical calibrator. All equipment meets ANSI standards for Type 1 instrumentation. Table 5 shows the results of the noise measurements, Figure 1 shows the locations of the noise monitoring sites, and Appendix B graphically shows the results of the continuous 24-hour noise measurement data.

Table 5 Summary of Ambient Noise Measurement Data								
Site	Location	L _{dn} / CNEL*	Average Measured Hourly Noise Levels, dBA					
			Daytime (7am-10pm)			Nighttime (10pm-7am)		
			L _{eq}	L ₅₀	L _{max}	L _{eq}	L ₅₀	L _{max}
A	Hotel Site ¹	68.5 dB	65.7	64.4	82.1	61.0	58.5	75.9
B	West-Central Portion of Site ²	62.0 dB	58.0	55.0	75.0	55.0	53.0	68.0
1	North Portion of the Site ¹	--	67.5	65.0	74.8	@ 12:35 p.m.		
2	Northwest Portion of the Site ²	--	64.8	61.0	72.4	@1:50 p.m.		

Source: j.c. brennan & associates, Inc., 2017 and 2020.
* Continuous 24-hour Noise Measurements
¹ Measurements occurred in January 2020
² Measurements occurred in November 2017

Existing Traffic Noise Levels

Traffic noise levels were determined using the Federal Highway Administration (FHWA RD77-108) Traffic Noise Prediction Model. Traffic volumes were based upon inputs from the traffic consultant (kd Anderson). Truck mix percentages were based upon field observations at the project site. Table 6 provides the results of the existing traffic noise analysis. Appendix C shows the inputs and results of the traffic noise modeling.

Table 6 Predicted Existing Traffic Noise Levels at 100-feet from the Roadway Centerline					
Roadway	Segment	Traffic Noise Level (Ldn/CNEL)	Distance to Noise Contours (feet)		
			60 dB Ldn/CNEL	65 dB Ldn/CNEL	70 dB Ldn/CNEL
Hammer Lane	Holman Road to Maranatha Drive	70 dB	452	210	97
Hammer Lane	Maranatha Drive to SR 99	70 dB	460	213	99
Maranatha Drive	South of Hammer Lane	49 dB	17	8	4
Source: j.c. brennan & associates, Inc., 2020					

IMPACTS and MITIGATION MEASURES

Significance Criteria

Consistent with Appendix G of the CEQA Guidelines, the project will have a significant impact related to noise if it will result in:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without project;
- 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, expose people residing or working in the project area to excessive noise levels within two miles of a public airport or public use airport; or
- For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.

The Project site is not located within two miles of a public or private airport or airstrip. Therefore, airport and airstrip noise is not discussed further in this analysis.

Determination of a Significant Increase in Noise Levels

The City of Stockton General Plan Noise provides specific guidance for assessing increases in ambient noise in Table 5-1 of the General Plan (*Table 2 of this report*) as follows:

- If existing noise standards are currently exceeded, a proposed project shall not incrementally increase noise levels by more than 3 dBA

Traffic Noise Impacts

Once again, traffic noise levels were determined using the Federal Highway Administration (FHWA RD77-108) Traffic Noise Prediction Model. Traffic volumes were based upon inputs from the traffic consultant (kd Anderson). Truck mix percentages were based upon overall traffic counts and vehicle classification conducted for the area roadways. Table 7 provides the results of the traffic noise analysis.

Based upon Table 7, the project will result in increases in traffic noise levels between 0 dB and 1 dB Ldn/CNEL, under the Existing Plus Approved Projects Plus Project Scenario. Based upon the footnote in Table 2 of this report (Table 5-1 of the General Plan), the project will not result in an a significant increase in traffic noise levels.

If existing noise standards are currently exceeded, a proposed project shall not incrementally increase noise levels by more than 3 dBA

The project will also not result in an exceedance of the 60 dB Ldn/CNEL at adjacent residences. This is a *less than significant impact*.

Table 7 Project Traffic Noise Levels Analysis							
Roadway	Segment	Noise Levels (Ldn/CNEL, dB) at 100-feet from the Roadway Centerline					
		Existing	Existing + Approved - No Project	Change	Existing + Approved - No Project	Existing + Approved + Project	Change
Hammer Lane	Holman Road to Maranatha Drive	70 dB	70 dB	0	70 dB	71 dB	+1 dB
Hammer Lane	Maranatha Drive to SR 99	70 dB	70 dB	0	70 dB	71 dB	+1 dB
Maranatha Drive	South of Hammer Lane	49 dB	56 dB	+7 dB	56 dB	57 dB	+1 dB
Source: j.c. brennan & associates, Inc. 2020.							

On-Site Noise Impacts Due to the Project

ARCO, Fast Food, Car Wash, AM/PM On-Site Vehicle Circulation Noise Impacts

The traffic analysis indicates that the overall project is expected to generate up to 1,316 daily trips, and approximately 236 peak hour trips. Parking lots and fueling island noise levels generally are a result of vehicles arriving or departing, car doors slamming, and people talking. Noise level data for these activities indicate that a typical sound exposure level (SEL) of 71 at a distance of 50 feet.

Based upon 236 peak hour trips for the entire commercial portion of the site, the noise exposure can be calculated as follows

$$Leq = 71 + 10 * \log (N_{eq}) - 35.6, \text{ dB}$$

71 is the mean sound exposure level (SEL) for an automobile arrival and departure, $10 * \log (N_{eq})$ is ten times the logarithm of the number of vehicle trips per day, and 35.6 is ten times the logarithm of the number of seconds in an hour.

The formula indicates that the predicted peak hour Leq is 59 dBA Leq at a distance of 50 feet.

Based upon a typical distance from the entrance to the project site to the nearest residences to the north (200-feet), and assuming all 236 trips occur at the north portion of the site, the predicted peak hour noise level is 45 dBA Leq. The predicted noise levels comply with the Municipal Code exterior noise level standards of 55 dBA Leq during the daytime period, and 45 dBA Leq during the nighttime period. The predicted noise levels are significantly less than the measured background noise levels shown in Table 5 and Appendix B. This is a *Less than Significant Impact*.

Car Wash Noise Level Impacts

The project includes a car wash located at the southwest portion of the project site. The car wash is proposed to operate during the daytime hours and cease operations at 9:00 p.m. The nearest residences to the north of the tunnel are located 750-feet. The project applicant has proposed to include a RYKO Mfg. 3-fan Slimline Dryer, or similar. Manufacturer data indicate that the car wash will result in a noise level of 70 dBA Leq at a distance of 70-feet from the tunnel exit, which is the noisiest portion of the car wash. The predicted noise level is 50 dBA Leq at the nearest residences to the north. The predicted noise levels comply with the Municipal Code exterior noise level standard of 55 dB Leq daytime noise level standard. The predicted noise levels are significantly less than the measured background noise levels shown in Table 5 and Appendix B.

Drive-thru Lane Noise Level Impacts

The proposed SONIC Drive In includes a drive-thru lane. To quantify the noise emissions from the proposed drive-thru, data from a Sacramento area drive-thru restaurant was used. The data was collected by conducting noise level measurements at a distance of 30 feet from the drive-thru lane and speaker box. The drive-thru speaker apparatus used at the test site is typical of most fast food type drive-thru speakers. The results of the noise level measurements are shown in Table 8.

Table 8 Drive-Thru Speaker Noise Levels					
# of Lanes	Distance (ft)	Orientation	Maximum, L_{max}	Average, L_{eq}	SEL
1	30	Directly in Front	61 dB	55 dB	72 dB
Source: j.c. brennan & associates, Inc., 2020					

It should be noted that maximum noise levels were observed to include periods of speech from the drive-thru speaker, as well as vehicle idling noise. Average (L_{eq}) and Sound Exposure Level (SEL) noise levels were also measured.

Assuming that 50% of the peak hour SONIC restaurant trip generation is associated with the drive-thru, there would be a total of 55 peak hour trips in the drive-thru. Based upon the measured noise levels and assuming 55 trips, the L_{eq} would be 54 dBA at a distance of 30-feet. The nearest residential property line is located approximately 420 feet to the north from the drive-thru speaker. At this distance, drive-thru noise levels are predicted to be 31 dB L_{eq} . This does not account for any shielding from the building facades. This is a *Less than Significant Impact*.

Traffic Noise Impacts Upon the Hotel

The proposed hotel will be required to achieve an exterior noise level standard of 65 dB Ldn/CNEL, and is applied at the outdoor area, such as the proposed pool. The project will also be required to achieve an interior noise level standard of 45 dB Ldn/CNEL. Figure 2 shows the hotel site plan, and Figure 3 shows the typical hotel elevations.

The exterior noise environment adjacent to the proposed hotel is dominated by traffic on Hammer Lane, and S.R. 99. The measured background noise levels due to traffic at the site indicates that the overall existing noise environment is approximately 70 dB Ldn/CNEL. Future traffic noise levels could increase by up to +1 dB, based upon projected increases in traffic volumes. For this analysis, it is assumed that the first floor will be exposed to traffic noise levels of approximately 71 dB Ldn/CNEL. Upper floors would be expected to be exposed to traffic noise levels of 3 dB higher due to lack of ground absorption and clearer line of sight to S.R. 99. Therefore, 2nd through 4th floors are assumed to be exposed to traffic noise levels up to 74 dB Ldn/CNEL. The proposed pool area for the hotel is located approximately 320-feet from Hammer Lane, and 900-feet from S.R. 99. There is significant shielding of traffic noise due to the hotel building at the pool area. The predicted noise level due to traffic is less than 61 dB Ldn/CNEL, so the pool area will comply with the exterior noise level standard of 65 dB Ldn/CNEL.

To judge the potential for achieving an interior noise level of 45 dB Ldn or less, it is necessary to determine the noise reduction provided by the building wall and roof facades. This may be calculated by assuming a generalized A-weighted noise frequency spectrum for the traffic noise. The composite transmission loss and resulting noise level in the receiving room is first determined. After correcting for room absorption, the overall noise level in the room is calculated.

The proposed building construction is a wood or metal frame, with a minimum of R-13 insulation in the stud cavities. The exterior siding is assumed to be a stucco finish or aluminum clad over 1/2" sheeting. The interior has 5/8" Type X gypsum board on the walls. Heating and air conditioning units utilize PTAC units through the walls.

Using the procedure described above, and typical floor plans and building plans, Table 10 shows the results of the interior noise calculations for a typical unit which has a noise exposure to two wall facades. However, it is assumed that the perpendicular facades are stairways, and not unit facades. Appendix D provides the calculation inputs for a typical room. The calculations shown in Table 9 include a +3 dB correction factor for any variations in workmanship.

Table 9
Hammer Lane Annexation - Fairfield Inn / TownePlace Suites
Calculated Interior Noise Levels

Unit	Exterior Roadway Noise Levels		Interior Roadway Noise Levels		
	Parallel Exterior	Perpendicular Noise	Parallel Interior	Perpendicular Interior	Cumulative Interior
End Unit - 1st floor*	71 dB Ldn	68 dB Ldn	43 dB Ldn	30 dB Ldn	43 dB Ldn
End Unit - 2nd through 4th floors**	74 dB Ldn	71 dB Ldn	45 dB Ldn	33 dB Ldn	45 dB Ldn

Appendix D shows the results of the Interior Calculation Model.

Source: j.c. brennan & associates, Inc., 2020

*** - These units require Windows with an STC rating of 30. In addition, interior gypsum board shall be applied to resilient channels on walls parallel to Hammer Lane. This includes both the north facing and south facing facades.**

**** - These units require Windows with an STC rating of 34. In addition, interior gypsum board shall be applied to resilient channels on walls parallel to Hammer Lane. This includes both the north facing and south facing facades.**

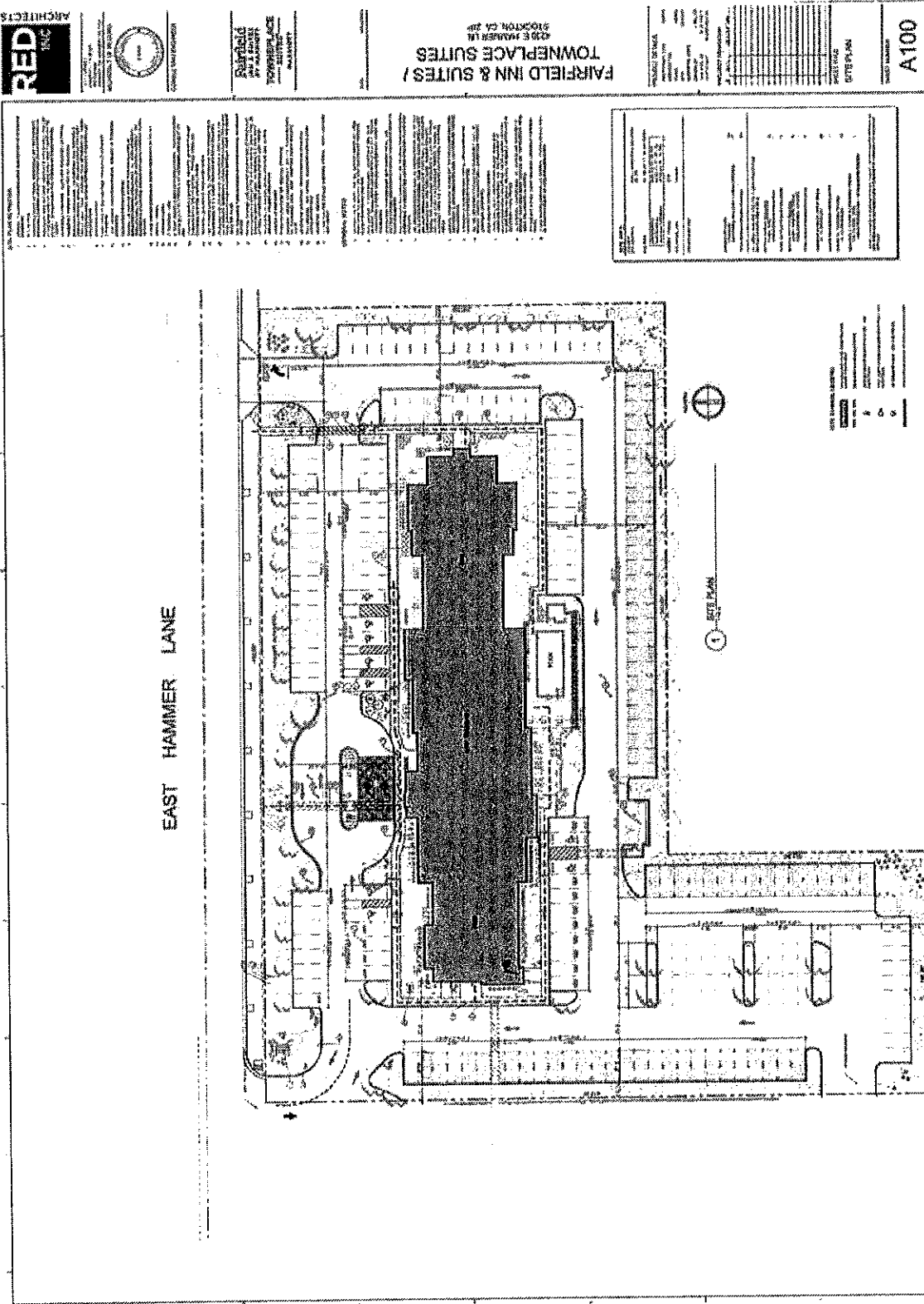
Based upon the calculations shown in Table 9, the proposed hotel will require the following facade improvements to comply with the interior noise level standard of 45 dB Ldn/CNEL:

Mitigation Measures for the Hotel Facades

1. First floor units will require windows with an STC rating of 30;
2. First floor units will require interior gypsum board to be applied to resilient channels on walls parallel to Hammer Lane. This includes both the north facing and south facing facades;
3. Second through fourth floor units will require windows with an STC rating of 34;
4. Second through fourth floor units will require interior gypsum board to be applied to resilient channels on walls parallel to Hammer Lane. This includes both the north facing and south facing facades.

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Figure 2
Hotel Site Plan





Polinfield / TOWNPLACE
 BY HARRISOT / SUITES
 HARRISOT

DATE: 1/11/17
 DRAWN BY: J.C. Brennan
 CHECKED BY: J.C. Brennan
 PROJECT: Polinfield / TOWNPLACE
 SHEET: A210

A210

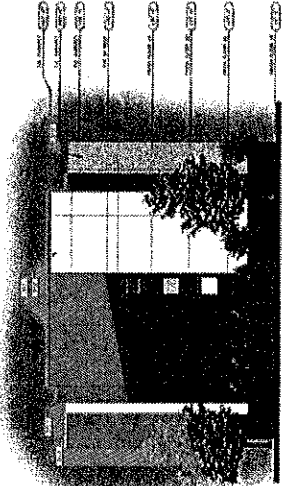
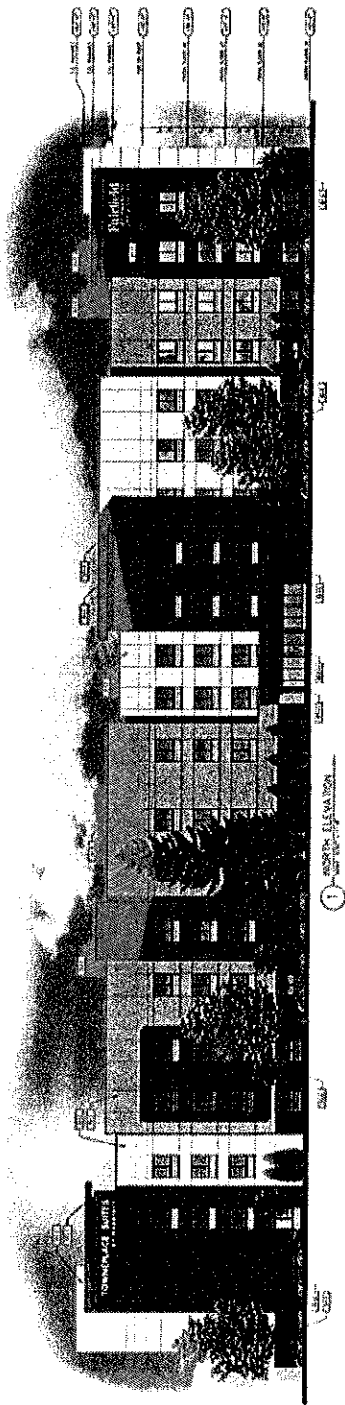


Figure 3
 Hotel Elevations

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Rev. 1/11/17

Construction Noise

During the construction of the project, including roads, water and sewer lines and related infrastructure, noise from construction activities would add to the noise environment in the project vicinity. Activities involved in construction would generate maximum noise levels, as indicated in Table 10, ranging from 76 to 90 dB at a distance of 50 feet. Construction activities would be temporary in nature and are anticipated to occur during normal daytime working hours.

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.

Table 10 Construction Equipment Noise Levels						
Type of Equipment	Predicted Noise Levels, L _{max} dB				Distances to Noise Contours (feet)	
	Noise Level at 50'	Noise Level at 100'	Noise Level at 200'	Noise Level at 400'	70 dB L _{max} contour	65 dB L _{max} contour
Backhoe	78	72	66	60	126	223
Compactor	83	77	71	65	223	397
Compressor (air)	78	72	66	60	126	223
Concrete Saw	90	84	78	72	500	889
Dozer	82	76	70	64	199	354
Dump Truck	76	70	64	58	100	177
Excavator	81	75	69	63	177	315
Generator	81	75	69	63	177	315
Jackhammer	89	83	77	71	446	792
Pneumatic Tools	85	79	73	67	281	500

Source: *Roadway Construction Noise Model User's Guide*. Federal Highway Administration. FHWA-HEP-05-054. January 2006.

Construction activities would be temporary in nature and are exempt from noise regulation during the hours of 7:00 a.m. to 7:00 p.m. as outlined in the Municipal Code as follows:

Activities Deemed Violations of This Division: *The following acts are a violation of this Division and are therefore prohibited.*

16-340.030 – Activities Deemed Violations of this Division

16-340.030(A) – Construction Noise. *Operations or causing the operation of tools or equipment on private property used in alteration, construction, demolition, drilling, or repair work between the hours of 10:00 p.m. and 7:00 a.m., so that the sound creates a noise disturbance across a residential property line, except for emergency work of public service utilities.*

Mitigation Measures for Construction Activities

Construction activities shall adhere to the requirements of the City of Stockton General Plan and Municipal Code with respect to hours of operation.

All equipment shall be fitted with factory equipped mufflers, and in good working order.

The City shall limit construction activities to the hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday. No construction shall occur on Sundays or national holidays without a written permit from the city.

CONCLUSIONS

The following mitigation measures shall be included in the project design:

Mitigation Measures for the Hotel Facades

1. First floor units will require windows with an STC rating of 30;
2. First floor units will require interior gypsum board to be applied to resilient channels on walls parallel to Hammer Lane. This includes both the north facing and south facing facades;
3. Second through fourth floor units will require windows with an STC rating of 34;
4. Second through fourth floor units will require interior gypsum board to be applied to resilient channels on walls parallel to Hammer Lane. This includes both the north facing and south facing facades.

Mitigation Measures for Construction Activities

5. *Construction activities shall adhere to the requirements of the City of Stockton General Plan and Municipal Code with respect to hours of operation.*
6. *All equipment shall be fitted with factory equipped mufflers, and in good working order.*
7. *The City shall limit construction activities to the hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday. No construction shall occur on Sundays or national holidays without a written permit from the city.*

Appendix A

Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz (Hz).
L_{dn}	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
L_{eq}	Equivalent or energy-averaged sound level.
L_{max}	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 L ₅₀ 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.
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.
Peak Noise	The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the <i>Maximum</i> level, which is the highest RMS level.
RT₆₀	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
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 passby, that compresses the total sound energy into a one-second event.
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.
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

2020-103 Hammer Lane Annexation
 24hr Continuous Noise Monitoring - Site A
 01/26/2020-01/27/2020

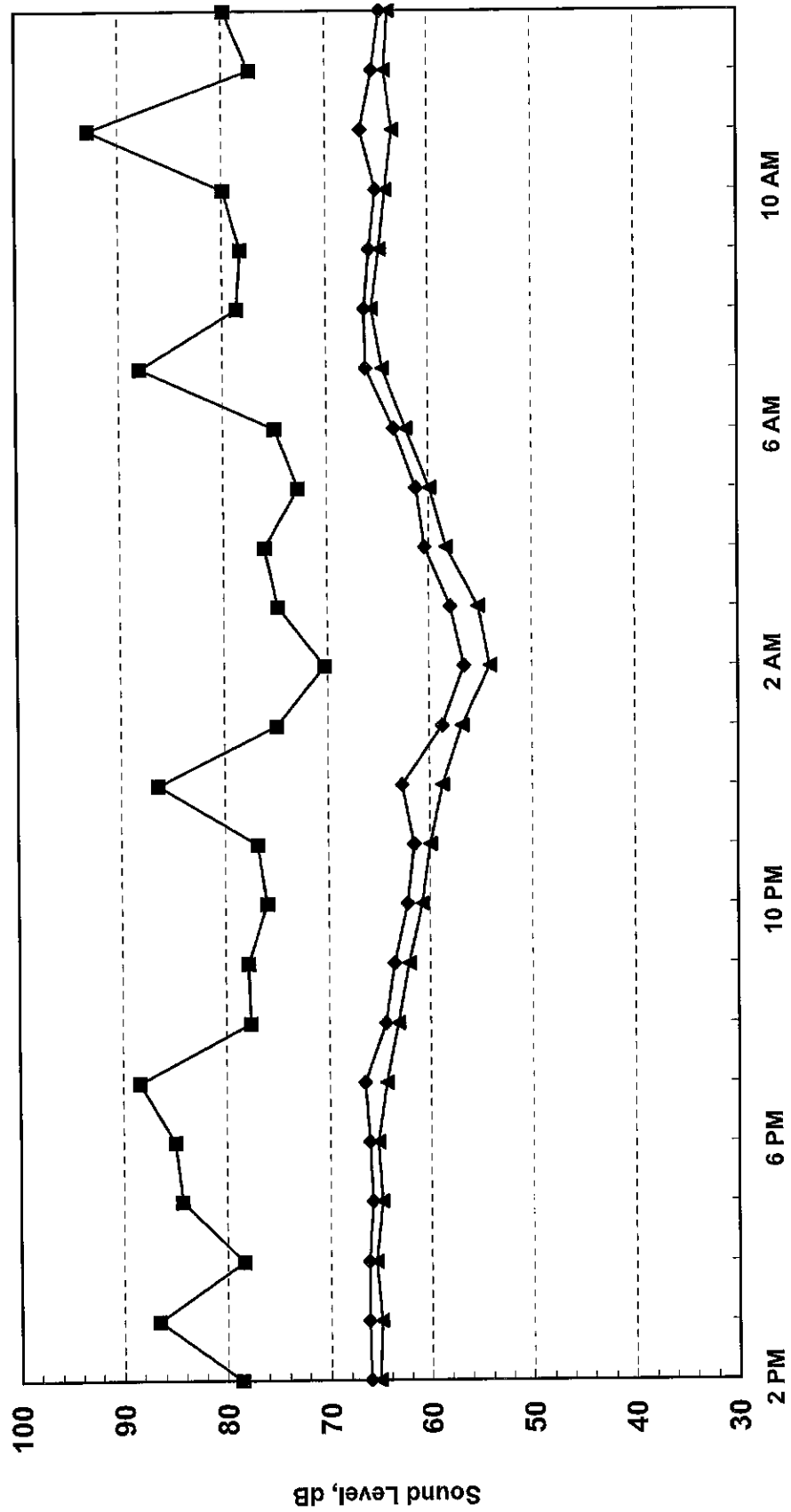
Hour	Leq	Lmax	L50	L90
14:00	66	79	65	61
15:00	66	87	65	61
16:00	66	78	65	62
17:00	66	84	65	61
18:00	66	85	65	61
19:00	67	88	64	60
20:00	64	78	63	58
21:00	64	78	62	57
22:00	62	76	61	56
23:00	62	77	60	56
0:00	63	86	59	54
1:00	59	75	57	51
2:00	57	70	54	49
3:00	58	75	55	49
4:00	60	76	58	52
5:00	61	73	60	55
6:00	63	75	62	58
7:00	66	88	64	60
8:00	66	79	66	62
9:00	66	78	65	61
10:00	65	80	64	60
11:00	67	93	63	59
12:00	65	77	64	60
13:00	65	80	64	60

Statistical Summary				
	Daytime (7 a.m. - 10 p.m.)		Nighttime (10 p.m. - 7 a.m.)	
	High	Low	Average	Average
Leq (Average)	66.6	63.5	65.7	61.0
Lmax (Maximum)	92.9	77.3	82.1	75.9
L50 (Median)	65.5	62.1	64.4	58.5
L90 (Background)	61.9	56.9	60.2	53.2

Computed Ldn, dB	68.5
% Daytime Energy	83%
% Nighttime Energy	17%

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Appendix B
 2020-103 Hammer Lane Annexation
 24hr Continuous Noise Monitoring - Site A
 01/26/2020-01/27/2020



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Ldn = 68.5 dB

Appendix B

Arco Fueling Station
 24hr Continuous Noise Monitoring - Site B
 November 14th - 15th, 2017

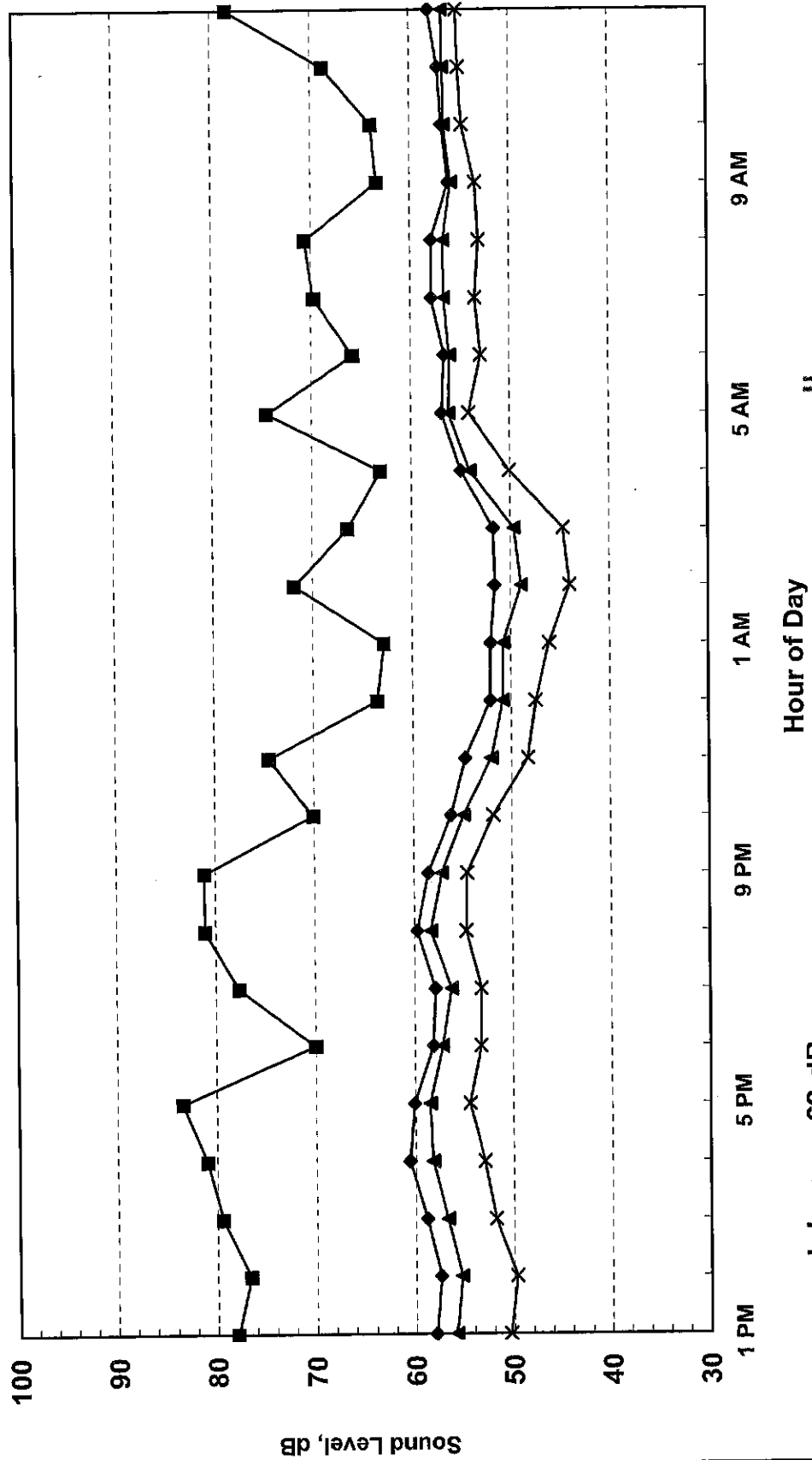
Hour	Leq	Lmax	L50	L90
13:00:00	57.9	77.92	55.84	50.32
14:00:00	57.43	76.61	55.29	49.66
15:00:00	58.81	79.4	56.68	51.8
16:00:00	60.53	80.96	58.19	52.93
17:00:00	60.04	83.4	58.48	54.37
18:00:00	58.09	69.98	57.13	53.24
19:00:00	57.86	77.65	56.19	53.19
20:00:00	59.67	81.05	58.27	54.69
21:00:00	58.53	81.12	57.12	54.56
22:00:00	56.15	70.1	54.87	51.85
23:00:00	54.66	74.48	52.05	48.29
0:00:00	52.11	63.59	50.8	47.45
1:00:00	52.01	62.83	50.75	46.09
2:00:00	51.57	71.82	48.89	44.03
3:00:00	51.69	66.44	49.62	44.65
4:00:00	54.97	63.08	54.07	50.06
5:00:00	56.88	74.46	56.16	54.12
6:00:00	56.59	65.83	56.05	52.89
7:00:00	57.87	69.7	56.58	53.45
8:00:00	57.87	70.58	56.66	53.09
9:00:00	56.12	63.35	55.8	53.39
10:00:00	56.78	63.88	56.55	54.7
11:00:00	57.14	68.76	56.65	55.07
12:00:00	58.09	78.4	56.74	55.25

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
Leq (Average)	High	Low	Average	High	Low	Average
Lmax (Maximum)	61	56	58	57	52	55
L50 (Median)	83	63	75	74	63	68
L90 (Background)	58	55	57	56	49	53
	55	50	53	54	44	49

Computed Ldn, dB	62
% Daytime Energy	80%
% Nighttime Energy	20%

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Appendix B
 Arco Fueling Station
 24hr Continuous Noise Monitoring - Site B
 November 14th - 15th, 2017



Appendix C

FHWA-RD-77-108 Highway Traffic Noise Prediction Model Data Input Sheet

Project #: 2020-103
 Description: Hammer Lane Annexation
 Ldn/CNEL: Ldn
 Hard/Soft: Soft

Segment	Roadway Name	Segment Description	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	Hammer Lane (E)	Holman to Maranatha	41,838	83		17	2	2	45	100	
2	Hammer Lane (E)	Maranatha to SR 99	42,936	83		17	2	2	45	100	
3	Maranatha Drive (E)	South of Hammer Lane	655	83		17	2	1	35	100	
4											
5	Hammer Lane (E+A)	Holman to Maranatha	47,411	83		17	2	2	45	100	
6	Hammer Lane (E+A)	Maranatha to SR 99	48,632	83		17	2	2	45	100	
7	Maranatha Drive (E+A)	South of Hammer Lane	3,224	83		17	2	1	35	100	
8											
9	Hammer Lane (E+A+P)	Holman to Maranatha	49,624	83		17	2	2	45	100	
10	Hammer Lane (E+A+P)	Maranatha to SR 99	49,645	83		17	2	2	45	100	
11	Maranatha Dr (E+A+P)	South of Hammer Lane	4,158	83		17	2	1	35	100	
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											

Appendix C

FHWA-RD-77-108 Highway Traffic Noise Prediction Model**Predicted Levels**

Project #: 2020-103
 Description: Hammer Lane Annexation
 Ldn/CNEL: Ldn
 Hard/Soft: Soft

Segment	Roadway Name	Segment Description	Autos	Medium Trucks	Heavy Trucks	Total
1	Hammer Lane (E)	Holman to Maranatha	68.0	59.4	63.9	70
2	Hammer Lane (E)	Maranatha to SR 99	68.1	59.5	64.0	70
3	Maranatha Drive (E)	South of Hammer Lane	46.8	39.7	41.8	49
5	Hammer Lane (E+A)	Holman to Maranatha	68.5	60.0	64.4	70
6	Hammer Lane (E+A)	Maranatha to SR 99	68.6	60.1	64.6	70
7	Maranatha Drive (E+A)	South of Hammer Lane	53.7	46.6	48.8	56
9	Hammer Lane (E+A+P)	Holman to Maranatha	68.7	60.1	64.6	71
10	Hammer Lane (E+A+P)	Maranatha to SR 99	68.7	60.2	64.6	71
11	Maranatha Dr (E+A+P)	South of Hammer Lane	54.8	47.7	49.9	57

Appendix C

FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Noise Contour Output

Project #: 2020-103
 Description: Hammer Lane Annexation
 Ldn/CNEL: Ldn
 Hard/Soft: Soft

Segment	Roadway Name	Segment Description	Distances to Traffic Noise Contours						
			75	70	65	60	55		
1	Hammer Lane (E)	Holman to Maranatha	45	97	210	452	973		
2	Hammer Lane (E)	Maranatha to SR 99	46	99	213	460	990		
3	Maranatha Drive (E)	South of Hammer Lane	2	4	8	17	37		
5	Hammer Lane (E+A)	Holman to Maranatha	49	106	228	491	1058		
6	Hammer Lane (E+A)	Maranatha to SR 99	50	108	232	499	1076		
7	Maranatha Drive (E+A)	South of Hammer Lane	5	11	23	50	108		
9	Hammer Lane (E+A+P)	Holman to Maranatha	51	109	235	506	1090		
10	Hammer Lane (E+A+P)	Maranatha to SR 99	51	109	235	506	1091		
11	Maranatha Dr (E+A+P)	South of Hammer Lane	6	13	28	60	129		

Appendix D**Building Facade Noise Reduction Worksheet**
Stockton Annexation - Fairfield Hotel - First Floor

Analysis Date: 2/16/2020 0:00

Room Description: End Unit

Parallel Panel Size, ft²: 234

Traffic Exterior level, dB: 71.0

Correction Factor, dB: 3

Perpendicular Panel Size, ft²: 135

Traffic Exterior level, dB: 68.0

Noise Source Information:

Material	Area(ft ²)	One-Third Octave Band Center Frequency (Hz)															
		125	160	200	250	315	400	500	630	800	1K	1.25K	1.6K	2K	2.5K	3.15K	4K
Arterial Traffic																	
Freeway Traffic																	

Sound Absorption Data:

Gyp Board	666	0.29	0.29	0.10	0.10	0.10	0.05	0.05	0.05	0.04	0.04	0.04	0.07	0.07	0.07	0.09	0.09
Glass	72	0.35	0.35	0.25	0.25	0.25	0.18	0.18	0.18	0.12	0.12	0.12	0.01	0.01	0.01	0.04	0.04
Carpet, latex backing on foam pad	390	0.08	0.08	0.27	0.27	0.27	0.39	0.39	0.39	0.34	0.34	0.34	0.48	0.48	0.48	0.63	0.63
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		0.00	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
Absorption Parallel, dB:		0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	-1
Absorption Perpendicular, dB:		-3	-3	-1	-1	-1	-2	-2	-2	-1	-1	-1	-2	-2	-2	-4	-4

Transmission Loss Information: Parallel Façade

Wall - Stucco wall with RC	188	35	41	50	49	53	55	58	58	58	58	59	59	60	58	57	60
Window - Millgard 910 1/8" 1/8" STC 30	36	22	21	23	18	20	23	25	28	32	35	38	41	44	44	40	31
PTAC - STC 27 (4.8 s.f.)	10	13	13	11	13	18	22	20	22	25	29	30	31	31	32	33	33

Transmission Loss Information: Perpendicular Façade

Wall - Stucco Wall (Egen)	135	21	21	33	33	33	41	41	41	46	46	46	47	47	47	51	51
Window - Millgard 910 1/8" 1/8" STC 30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Summary

Composite TL - Parallel, dB:	25	25	24	23	27	30	30	30	33	36	40	42	43	44	45	44	38
Composite TL - Roof, dB:	21	21	33	33	33	41	41	41	41	46	46	46	47	47	47	51	51
Absorption Parallel, dB:	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	-1	-1
Absorption Perpendicular, dB:	-3	-3	-1	-1	-1	-2	-2	-2	-2	-1	-1	-1	-2	-2	-2	-4	-4
Safety Factor, dB:	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Interior Level - Parallel, dB:	30	32	35	37	34	32	31	32	32	32	28	25	20	17	15	9	10
Interior Level - Roof, dB:	25	24	15	18	19	13	15	15	18	16	17	16	13	11	8	0	-2

Traffic Outside Level, dB: 71

Traffic Noise Reduction, dB: 28

Traffic Interior Level, dB: 43

Total Interior Noise Level, dB: 43

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Appendix D**Building Facade Noise Reduction Worksheet**

Stockton Annexation - Fairfield Hotel - Second through Fourth Floor

Analysis Date: 2/16/2020 0:00

Room Description: End Unit

Parallel Panel Size, ft²: 234

Traffic Exterior level, dB: 74.0

Correction Factor, dB: 3

Perpendicular Panel Size, ft²: 135

Traffic Exterior level, dB: 71.0

Noise Source Information:

Material	Area(ft ²)	One-Third Octave Band Center Frequency (Hz)															
		125	160	200	250	315	400	500	630	800	1K	1.25K	1.6K	2K	2.5K	3.15K	4K
Arterial Traffic																	
Freeway Traffic																	

Sound Absorption Data:

Gyp Board	666	0.29	0.29	0.10	0.10	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.07	0.07	0.07	0.09	0.09
Glass	72	0.35	0.35	0.25	0.25	0.18	0.18	0.18	0.12	0.12	0.12	0.12	0.01	0.01	0.01	0.04	0.04
Carpet, latex backing on foam pad	390	0.08	0.08	0.27	0.27	0.39	0.39	0.39	0.34	0.34	0.34	0.34	0.48	0.48	0.48	0.63	0.63
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		0.00	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
Absorption Parallel, dB:	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	-1	-1
Absorption Perpendicular, dB:	-3	-3	-1	-1	-1	-2	-2	-2	-2	-1	-1	-1	-2	-2	-2	-4	-4

Transmission Loss Information: Parallel Façade

Wall - Stucco wall with RC	188	35	41	50	49	53	55	58	58	58	59	59	59	60	58	57	60
Window - Quiet Home STC 34	36	22	24	22	25	29	32	33	35	35	35	35	36	36	37	37	36
PTAC - STC 27 (4.8 s.f.)	10	13	13	11	13	18	22	20	22	25	29	30	31	31	32	33	33

Transmission Loss Information: Perpendicular Façade

Wall - Stucco Wall (Egen)	135	21	21	33	33	33	41	41	41	46	46	46	47	47	47	51	51
Window - Quiet Home STC 34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Summary		24	26	31	34	33	41	41	46	46	46	46	47	47	47	51	51

Composite TL - Parallel, dB:	25	26	24	26	31	34	33	35	37	40	40	40	41	41	42	43	42
Composite TL - Roof, dB:	21	21	33	33	33	41	41	41	46	46	46	46	47	47	47	51	51
Absorption Parallel, dB:	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	-1	-1
Absorption Perpendicular, dB:	-3	-3	-1	-1	-1	-2	-2	-2	-1	-1	-1	-1	-2	-2	-2	-4	-4
Safety Factor, dB:	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Interior Level - Parallel, dB:	33	35	38	38	33	30	32	33	34	31	29	25	23	20	13	10	10
Interior Level - Roof, dB:	28	27	18	21	22	16	18	21	19	20	19	16	14	11	3	1	1

Traffic Outside Level, dB: 74

Traffic Noise Reduction, dB: 29

Traffic Interior Level, dB: 45

Total Interior Noise Level, dB: 45

Traffic - Outside Level, dB 71

Traffic Noise Reduction, dB 38

Traffic Interior Level, dB 33

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**APPENDIX E
TRAFFIC ANALYSIS**

*KD Anderson & Associates, Inc.*Transportation Engineers

May 12, 2021

Mr. Charlie Simpson
BaseCamp Environmental, Inc.
115 S. School Street, Suite 14
Lodi, CA 95240

RE: TRAFFIC ANALYSIS OF THE HAMMER LANE ARCO & HOTEL PROJECT

Dear Mr. Simpson:

On behalf of KD Anderson & Associates (KDA), I am pleased to submit this traffic analysis report on the Hammer Lane ARCO & Hotel project. This report presents the following information:

- executive summary,
- project description,
- approach and methods,
- existing setting,
- near-term future background, and
- project impacts.

This version of the report incorporates revisions made in responses to City of Stockton comments on the January 14, 2020 version of this report. The comments were received by BaseCamp Environmental and KDA on April 14, 2021. Except where noted, existing setting data, required methods and assumptions are those that were in place at the time the January 2020 version of this report was prepared.

EXECUTIVE SUMMARY

This letter report presents the results of a focused traffic analysis of the proposed Hammer Lane ARCO & Hotel project. The proposed project is composed of retail commercial development, including a sit-down restaurant, fast-food restaurant and carwash, on the southeast corner of the intersection of Hammer Lane & Maranatha Drive in Stockton, California. Specific land uses, including prospective tenants and building sizes, are described in more detail below in the *Project Description* section of this report.

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The proposed project is considered to have a less-than-significant impact on traffic operations, bicycle and pedestrian facilities, public transit service, and vehicle miles traveled (VMT). With the implementation of recommended improvements, the proposed project is considered to have adequate project site circulation and access.

PROJECT DESCRIPTION

The Hammer Lane ARCO & Hotel project site is located southeast of the intersection of Hammer Lane & Maranatha Drive in Stockton, California. The regional location of the project site is shown in the enclosed **Figure 1**. Roadways in the vicinity of the project site are shown in the enclosed **Figure 2**. The west portion of the site is shown in the enclosed **Figure 3**. The east portion is shown in the enclosed **Figure 4**. The proposed project includes the following land uses:

- a Black Bear Diner restaurant in a 5,338 building square feet (sf) structure,
- a Sonic Drive-In restaurant in a 2,720 sf structure,
- a single-tunnel automated car wash,
- an ARCO ampm convenience store in a 3,922 sf structure and 16 vehicle fueling positions, and
- a Fairfield Inn & Suites and Townplace Suites hotel with 144 guest rooms (Burkett pers. comm.).

As shown in **Figure 3** and **Figure 4**, access to the project site would be provided by:

- two driveway connections to Hammer Lane along the northern edge of the project site,
- two driveway connections to Maranatha Drive along the western edge of the project site, and
- one driveway connection to State Route (SR) 99 West Frontage Road on the southern edge of the project site.

The following describes turning movements in and out of the project site driveways:

- Because of existing raised medians along Hammer Lane, turning movements at the two driveway connections to Hammer Lane are assumed to be limited to right-turns.

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- Because of planned future raised medians along Maranatha Drive, turning movements at the two driveway connections to Maranatha Drive are assumed to be limited to right-turns (Mann pers. comm.).
- The driveway connection to SR 99 West Frontage Road is assumed to allow both left-turn and right-turn movements.

Existing sidewalks are present along the north side of the project site along Hammer Lane. The proposed project would include construction of new sidewalks along Maranatha Drive along the west side of the project site.

The Hammer Lane ARCO & Hotel project site has a Commercial land use designation in the City of Stockton *Envision Stockton 2040 General Plan* (City of Stockton 2018a).

APPROACH AND METHODS

The traffic analysis presented in this report assesses topics and applies methods described in the *City of Stockton Traffic Impact Analysis Guidelines* (City of Stockton 2003).

To comply with the California Environmental Quality Act (CEQA) for the Hammer Lane ARCO & Hotel project, our understanding is the City of Stockton is considering preparation of an addendum, rather than a mitigated negative declaration (MND) or an environmental impact report (EIR). Generally, a full traffic impact study (TIS) would be prepared to support an MND or EIR. Consistent with preparation of an addendum, this report presents a focused traffic analysis in lieu of a full TIS. This report assesses the following topics:

- traffic operations,
- public transit,
- pedestrian and bicycle travel,
- VMT, and
- site access and circulation.

Analysis Methods

The following is a description of the analysis methods used in this report.

Intersection Level of Service Analysis Procedures. Level of service (LOS) analysis provides a basis for describing existing traffic conditions and for evaluating the significance of project-related traffic impacts. Level of service measures the quality of traffic flow and is represented by letter designations from A to F, with a grade of A referring to the best conditions, and F representing the worst conditions. The characteristics associated with the various LOS for intersections are presented in the enclosed **Table 1**.

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Level of service at both signalized and unsignalized intersections was analyzed using methods presented in the *Highway Capacity Manual*. Methods described in the *Highway Capacity Manual* were used to provide a basis for describing traffic conditions and evaluating the significance of project traffic impacts. As specified by City of Stockton staff, methods from the *Highway Capacity Manual 2000* (Transportation Research Board 2000) were used to analyze local roadway intersections. As specified in the *City of Stockton Transportation Impact Analysis Guidelines* (City of Stockton 2003), the Traffix software package was used to analyze local roadway intersections.

Caltrans District 10 recommends use of the *Highway Capacity Manual 6th Edition* (Transportation Research Board 2016) and the Synchro software package (Trafficware 2020). Therefore, freeway ramp intersections were analyzed using *Highway Capacity Manual 6th Edition* methods and the Synchro software package.

The lengths of vehicle queues were also analyzed for this report. Methods presented in the *Highway Capacity Manual 2000* and *Highway Capacity Manual 6th Edition* were used to analyze queuing. 95th percentile queue length values are presented in this report. The calculation of vehicles queues are shown in the LOS calculation worksheets presented in the technical appendix. The results are summarized in each set of LOS calculation worksheets.

Signal Warrants Procedures. Traffic signal warrants are a series of standards which provide guidelines for determining if a traffic signal is appropriate. Signal warrant analyses are typically conducted at intersections of uncontrolled major streets and stop sign-controlled minor streets. If one or more signal warrants are met, signalization of the intersection may be appropriate. However, a signal should not be installed if none of the warrants are met, because installation of signals would increase delays on the previously-uncontrolled major street, resulting in an undesirable increase in overall vehicle delay at the intersection. Signalization may also increase the occurrence of certain types of accidents. Therefore, if signals are installed where signal warrants are not met, the detriment of increased accidents and overall delay may be greater than the benefit in traffic operating conditions on the single worst movement at the intersection. Signal warrants, then, provide an industry-standard basis for identifying when the adverse effect on the worst movement is substantial enough to warrant signalization.

For this report, available data at unsignalized intersections are limited to a.m. and p.m. peak hour volumes. Thus, unsignalized intersections were evaluated using the Peak Hour Warrant (Warrant Number 3) from the California Department of Transportation document *California Manual on Uniform Traffic Control Devices* (California Department of Transportation 2014). This warrant was applied where the minor street experiences long delays in entering or crossing the major street for at least one hour of the day. The Peak Hour Warrant itself includes several components. Some of the components involve comparison of traffic volumes and vehicle delay to a series of standards. Another component involves comparison of traffic volumes to a nomograph.

Even if the peak hour warrant is met, a more detailed warrant study is recommended before a signal is installed. The more detailed study should consider volumes during the eight highest hours of the day, volumes during the four highest hours of the day, pedestrian traffic, and accident histories.

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Signal warrant analysis worksheets for all stop sign-controlled intersections are presented in the technical appendix.

Roadway Segment Level of Service Analysis Procedures. Roadway segment LOS was analyzed for this report based on methods used in the *Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements Draft EIR* (City of Stockton 2018b). These methods set maximum daily traffic volume thresholds for each LOS. The thresholds are shown in the enclosed **Table 2**.

As shown in **Table 2**, the roadway segment LOS analysis method sets separate thresholds for:

- different types of facilities (i.e., freeways, arterials, and collectors);
- different number of lanes; and
- different area types (i.e., new versus existing).

As described in City of Stockton 2018b:

“Thresholds for arterials and collectors were based on Highway Capacity Manual calculations and were developed in conjunction with City staff at the time the current General Plan analysis was prepared. The arterial thresholds distinguish between roads in the existing urbanized area and those in new development areas; because arterials in new development areas can be designed to higher standards, with medians, exclusive turn lanes, and controlled access from adjacent uses, the capacities are higher than those in previously-developed areas. Thresholds for freeways were based on Highway Capacity Manual procedures relating levels of service to vehicle density ranges.”

As specified in City of Stockton 2018b, the “Existing” area is generally located between I-5 and SR 99, south of Eight Mile Road. Eight Mile Road itself is considered a “New” arterial due to the lack of existing development in the area.

Analysis Scenarios

For this report, traffic operating conditions were evaluated under the following three development scenarios:

- Existing Conditions,
- Existing Plus Approved Projects (EPAP) No Hammer Lane ARCO & Hotel Project, and
- EPAP Plus Hammer Lane ARCO & Hotel Project.

Development scenarios for traffic studies often include long-term future Cumulative conditions. However, for the following reasons, analysis of Cumulative conditions was not conducted for this report:

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- As noted earlier in the *Project Description* section of this report, the Hammer Lane ARCO & Hotel project site has a Commercial land use designation in the City of Stockton Envision Stockton 2040 General Plan (City of Stockton 2018a).
- Land uses proposed for the Hammer Lane ARCO and Hotel project are consistent with the current Commercial General Plan land use designations. No change to “background” current General Plan land use designations are proposed.
- The General Plan was adopted in December 2018. Traffic analysis, including the proposed project land use designations, was included in the EIR prepared for the General Plan (City of Stockton 2018b).
- As shown in the enclosed **Exhibit 1**, traffic volumes on Hammer Lane under 2040 conditions with General Plan land uses were forecast for the *Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements Draft EIR*. Under 2040 with General Plan conditions, Hammer Lane in the Hammer Lane ARCO & Hotel project study area is forecast to operate at LOS A.
- As also shown in **Exhibit 1**, the 2040 with General Plan traffic volumes on Hammer Lane in the Hammer Lane ARCO & Hotel project study area were forecast to be lower than Base Year conditions. As a result traffic volumes under long-term future Cumulative conditions would be lower than under Existing conditions and lower than under EPAP conditions.

In lieu of a traffic analysis of long-term future Cumulative conditions, the traffic analysis presented in the *Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements Draft EIR* is incorporated by reference into this report for the Hammer Lane ARCO & Hotel project. Because 2040 with General Plan traffic volumes on Hammer Lane in the Hammer Lane ARCO & Hotel project study area are forecast to be lower than Base Year conditions, the analysis of EPAP No Project conditions and EPAP Plus Project conditions is considered to adequately disclose project-related impacts on traffic operations.

Study Facilities

The traffic operations analysis presented in this report includes an evaluation of the intersections and roadway segments that provide access to the project site and would be most likely to be affected by the Hammer Lane ARCO & Hotel project. The study facilities include the following nine intersections:

1. Hammer Lane & Maranatha Drive
2. Hammer Lane & Moreland Street
3. Hammer Lane & State Route 99 Southbound Ramps
4. Hammer Lane & State Route 99 Northbound Ramps
5. Hammer Lane & North Project Driveway
6. Hammer Lane & Northeast Project Driveway

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7. Maranatha Drive & Northwest Project Driveway
8. Maranatha Drive & Southwest Project Driveway
9. State Route 99 West Frontage Road & South Project Driveway

These locations are shown in the enclosed **Figure 5**. The numbers listed above correspond to the location numbers shown in **Figure 5**.

The study facilities include the following three roadway segments:

- Hammer Lane between Holman Road and Maranatha Drive
- Hammer Lane between Maranatha Drive and the SR 99 Southbound Ramps
- Maranatha Drive south of Hammer Lane

Level of Service Significance Thresholds

In this report, the significance of the proposed project's impact on traffic operating conditions is based on a determination of whether resulting LOS is considered acceptable. A project's impact on traffic conditions is considered significant if implementation of the project would result in LOS changing from levels considered acceptable to levels considered unacceptable, or if the project would substantially worsen already unacceptable LOS.

The *City of Stockton Transportation Impact Analysis Guidelines* (City of Stockton 2003) note that:

"The City of Stockton's General Plan has a LOS 'D' standard for its roadway system. Intersections and roadway segments operating at LOS 'A', 'B', 'C', or 'D' conditions are considered acceptable, while those operating at LOS 'E' or 'F' conditions are considered unacceptable.

"For a City intersection, a transportation impact for a project is considered significant if the addition of project traffic would cause an intersection that would function at LOS 'D' or better without the Project to function at LOS 'E' or 'F'.

"For City intersections with a LOS 'E' or 'F' conditions without the project, a transportation impact for a project is considered significant if the addition of project traffic causes an increase of greater than 5 seconds in the average delay for the intersection."

Portions of the City's guidelines do not specifically address significance thresholds for roadway segments. For this report, the City's significance thresholds described above are also applied to roadway segments. As shown in **Table 1** and **Table 2**, LOS at intersections is measured in seconds of delay, and LOS on roadway segments is measured in traffic volume. Therefore, for roadway segments already at LOS E or F, an increase of greater than five seconds of delay cannot be identified. Because roadway segment LOS is measured in traffic volumes, rather than seconds of delay, an increase in traffic volumes is used in this report, in lieu of the threshold of five seconds of delay. For this report, if a roadway segment operates at LOS E or F without the

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project, an impact is considered significant if the addition of project traffic causes an increase of greater than five percent in traffic volumes.

In this report, a project's impact will be considered significant if:

- the project would result in traffic operating conditions changing from an acceptable LOS to an unacceptable LOS, or
- when LOS without the project is already unacceptable, the project would result in a substantial degradation of traffic operating conditions (e.g., an increase of more than five seconds of delay at an intersection or an increase of more than five percent in traffic volume on a roadway segment).

Vehicle Miles Traveled Significance Threshold

The City of Stockton General Plan (City of Stockton 2018a) Policy TR-4.3 addresses the topic of vehicle miles traveled (VMT) as an impact in California Environmental Quality Act (CEQA) documents. The policy states,

“Use the threshold recommended by the California Office of Planning and Research for determining whether VMT impacts associated with land uses are considered significant under State environmental analysis requirements.”

The California Office of Planning and Research (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA* (State of California 2018) provides recommended thresholds for determining the significance of VMT impacts associated with land use development projects. Specific thresholds are provided for residential, office, and retail commercial types of development. For retail commercial development, the OPR Technical Advisory provides the following:

“Recommended threshold for retail projects: A net increase in total VMT may indicate a significant transportation impact.”

In this report, therefore, the proposed project is considered to have a significant impact on VMT if the project would result in a net increase in VMT. The net change in vehicle travel is determined by comparing project-related travel to the amount of travel that would occur without approval of the proposed project (i.e., development of the project site with the current land use designation).

Travel Forecasting

As part of the General Plan update process, the City of Stockton developed a series of travel demand forecasting simulation models. Travel forecasts for this report are based on the City of Stockton General Plan travel demand forecasting simulation model (City of Stockton 2004).

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The most recent City General Plan update analysis did not include development of an Existing Plus Approved Projects (EPAP) traffic model. Therefore, EPAP scenario background traffic volume forecasts were based on the EPAP traffic model developed for the prior General Plan. The EPAP forecasts were augmented to include other recently-approved land use development projects in the study area (e.g., the CarMax project along the west side of Maranatha Drive south of Hammer Lane).

The travel model for the EPAP condition was used to develop forecasts of future year traffic volumes for this report. The City's travel model produces forecasts of daily traffic volumes. The forecasts of daily volumes generated by the City's travel model are adequate for use in the analysis of roadway segment LOS, and are used for daily volume forecasts in this report. However, the daily volumes generated by the traffic model are not, by themselves, adequate for use in the peak hour LOS analysis of study intersections.

Daily traffic volumes from the travel model were used to generate growth factors. These growth factors were applied to existing peak hour intersection turning movement traffic volumes. The development of future year intersection turning movement traffic volumes requires that the turning movements at each intersection "balance". To achieve the balance, inbound traffic volumes must equal the outbound traffic volumes, and the volumes must be distributed among the various left-turn, through, and right-turn movements at each intersection. The "balancing" of future year intersection turning movement traffic volumes was conducted using methods described in the Transportation Research Board's (TRB's) National Cooperative Highway Research Program (NCHRP) Report 255, *Highway Traffic Data for Urbanized Area Project Planning and Design* (Transportation Research Board 1982). The NCHRP 255 method applies the desired peak hour directional volumes to the intersection turning movement volumes, using an iterative process to balance and adjust the resulting forecasts to match the desired peak hour directional volumes.

EXISTING SETTING

The following is a description of the existing transportation setting in the vicinity of the Hammer Lane ARCO & Hotel project site. Except where noted, the following describes conditions present at the time the traffic analysis commenced, generally 2019. Since the outbreak of the Covid-19 pandemic in early 2020, traffic volumes have at times been lower than normal. With the pandemic, places of employment, schools, social and recreational gatherings, sports events, restaurants, and many other types of activities have been substantially reduced or prohibited. As a result, the use of new traffic volume count data collected during the pandemic could result in volumes that are unrepresentatively low. The use of traffic volume data collected in 2019 ensures data used in the traffic analysis are representative.

Roadway Network

The following is a description of roadways that provide access to the proposed project site. These roadways are shown in **Figure 2**.

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State Route 99 traverses the Central Valley, connecting Sacramento and points north with numerous Central Valley cities, including Modesto, Merced, Fresno and Bakersfield. Three travel lanes are provided in each direction in the vicinity of the project site, with auxiliary lanes present at some locations. Twelve interchanges are provided along the 12-mile length of SR 99 within and adjacent to the City limits. Average daily traffic (ADT) volumes on SR 99 range between 73,000 and 81,000 in the vicinity of the project site (California Department of Transportation 2020).

SR 99 West Frontage Road is an undivided 2-lane frontage road located immediately west of SR 99. The northern terminus of the frontage road is north of Eight Mile Road. The southern terminus is at an overcrossing of SR 99, approximately one mile south of Hammer Lane. The frontage roadway is designed to intercept, collect, and distribute traffic crossing, entering, or leaving the freeway, and to furnish access to property that otherwise would be isolated as a result of the controlled access freeway. SR 99 West Frontage Road provides direct access to light industrial, commercial, and residential development.

Hammer Lane is a major east-west arterial along the northern boundary of the proposed project site. It has a western terminus west of Interstate 5 (I-5), and an eastern terminus east of SR 99. Hammer Lane has access to both of these freeways via interchanges. West of Thornton Road, Hammer Lane is six lanes wide. In the vicinity of the project site, Hammer Lane is eight lanes wide.

Maranatha Drive is a north-south roadway with a northern terminus north of Morada Lane, and a southern terminus approximately 750 feet south of Hammer Lane. A right-angle turn is present at the southern terminus of Maranatha Drive, where the name of the roadway changes to SR 99 West Frontage Road. The northern portion of Maranatha Drive is four lanes wide. The southern portion is two lanes wide. Maranatha Drive is planned to be extended south of the March Lane extension.

Existing Traffic Volumes

Intersection turning movement count data at the study intersections were collected for this report. The peak period intersection turning movement count data were collected on Tuesday March 5, 2019. The data were collected during the 7:00 a.m. to 9:00 a.m. period, and the 4:00 p.m. to 6:00 p.m. period. Volumes during the highest one-hour period were used for this report.

Figure 5 presents the existing lane configurations and existing a.m. peak hour and p.m. peak hour traffic volumes at the existing study intersections.

Roadway segment traffic volume count data were collected for this report for a 24-hour period on Tuesday March 5, 2019. The enclosed **Table 3** presents the existing daily traffic volumes for study roadway segments.

Traffic count data collection worksheets used for this report are presented in the technical appendix.

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Existing Intersection Level of Service

The enclosed **Table 4** presents a summary of existing a.m. peak hour and p.m. peak hour LOS at the four existing study intersections. The worksheets presenting the calculation of LOS are included in the technical appendix.

All of the four existing study intersections operate at acceptable LOS C or better during both the a.m. peak hour and the p.m. peak hour. No improvements are needed at these intersections to achieve acceptable LOS.

Existing Roadway Segment Level of Service

Table 3 presents a summary of existing LOS on the three study roadway segments.

All of the three study roadway segments operate at acceptable LOS C or better under existing conditions. No improvements are needed on these roadway segments to achieve acceptable LOS.

Public Transportation

The San Joaquin Regional Transit District (SJRTD) is the primary provider of public transportation service in San Joaquin County, providing services to the Stockton metropolitan area, as well as inter-city, inter-regional, and rural transit service. SJRTD provides fixed-route, flexible fixed-route, and dial-a-ride services in Stockton. Each service is described in more detail below. (San Joaquin Regional Transit District 2020)

- Stockton Metropolitan Area Fixed Route Service operates 33 fixed routes within the Stockton metropolitan area.
- Intercity Fixed Route Service is provided by a route between Stockton and the Lodi Station in downtown Lodi connecting with Lodi Grapeline, Calaveras Transit, Delta Breeze, Sacramento South County Transit (SCT)/LINK buses.
- Interregional Commuter Service is a subscription commuter bus service. A total of eight routes connect San Joaquin County to Sacramento, the San Francisco Bay Area, and the Bay Area Rapid Transit (BART) system.
- SJRTD operates two Dial-a-Ride services. General Public Dial-A-Ride is a curb-to-curb service in areas not currently being served by RTD or other local transportation providers. Passengers are required to use other public transportation options currently available in their area. Stockton Metro Area Dial-A-Ride (SMA-ADA) is a curb-to-curb service operating within Stockton Metropolitan Area for passengers with an Americans with Disabilities Act (ADA) Certification.

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- Hopper Service is a deviated fixed-route service connecting Stockton, Tracy, Lodi, Manteca, Ripon, and Lathrop. The Metro Hopper provides nine routes. The County Hopper provides six routes.

As shown in the enclosed **Figure 6**, SJRTD service in the vicinity of the proposed project site as of August 2020 is provided by:

- Metro Hopper Route 6,
- Express Route 43,
- Route 335,
- Route 345,
- Route 340,
- Route 375,
- Route 371, and
- Route 360.

Park and Ride Facilities

Park and Ride lots are free parking facilities for commuters to use as a convenient meeting place for carpools, transit, and vanpools. Park and Ride lots in the Stockton area are listed below (San Joaquin Regional Transit District 2020 and San Joaquin Council of Governments 2007).

- The Calvary First Church at 8407 Kelley Drive served by Route 163.
- The Hammer Crossings Shopping Center at the Hammer Lane & Sampson Road Dollar Tree Store, 3728 Hammer Lane, served by Route 163.
- The Lifesong Church, 3034 Michigan Avenue, served by Routes 150 and 152.
- The Wal-Mart parking lot on Hammer Lane, west of SR 99.
- The Marina Center, northwest of the Benjamin Holt Drive interchange on I-5.

Bicycle and Pedestrian Facilities

The generally level terrain and mild weather make bicycling and walking viable forms of transportation in Stockton. The City of Stockton has an extensive network of bicycle facilities, including off-street trails and paths, as well as on-street bicycle lanes and routes. Many of these facilities also support pedestrian travel. According to Caltrans guidelines, bicycle facilities are generally divided into four categories:

- **Class I Bikeway (Bike Path).** A completely separate facility designated for the exclusive use of bicycles and pedestrians with vehicle and pedestrian cross-flow minimized.

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- **Class II Bikeway (Bike Lane).** A striped lane designated for the use of bicycles on a street or highway. Vehicle parking and vehicle/pedestrian cross-flow are permitted at designated locations.
- **Class III Bikeway (Bike Route).** A route designated by signs or pavement markings for bicyclists within the vehicular travel lane (i.e., shared use) of a roadway.
- **Class IV Bikeway (Separated Bikeway).** A bikeway for the exclusive use of bicycles and includes a separation required between the separated bikeway and the through vehicular traffic. The separation may include, but is not limited to, grade separation, flexible posts, inflexible posts, inflexible barriers, or on-street parking.

Striped bicycle lanes are present on the north and south sides of Hammer Lane along the north side of the project site, and extend along Hammer Lane both east and west of the project site.

There is an existing Class I bike path along a southwest—northeast utility corridor north of Hammer Lane approximately one-quarter mile north of the proposed project site. The City of Stockton General Plan presents a map showing existing and planned bicycle facilities in the Stockton area, shown on the enclosed **Figure 7**. The map shows a planned extension of the Class I bike path to the southwest, south of Hammer Lane, and a bridge crossing Hammer Lane.

Data on existing bicycle and pedestrian travel volumes at the four existing study intersections were collected on March 5, 2019. These data are presented in the technical appendix. Existing bicycle and pedestrian travel volumes adjacent to the project site are low. At the intersection of Hammer Lane & Maranatha Drive:

- during the period between 7:00 a.m. and 9:00 a.m. one bicycle was observed,
- during the period between 4:00 p.m. and 6:00 p.m. no bicycles were observed,
- during the period between 7:00 a.m. and 9:00 a.m. two pedestrians were observed, and
- during the period between 4:00 p.m. and 6:00 p.m. no pedestrians were observed.

EXISTING PLUS APPROVED PROJECTS NO HAMMER LANE ARCO & HOTEL PROJECT CONDITIONS

The EPAP No Hammer Lane ARCO & Hotel project condition is a near-term future background condition. This condition is also referred to in this report as EPAP No Project conditions. Development of land uses associated with previously-approved projects are assumed in this condition. This scenario does not include development of the proposed Hammer Lane ARCO & Hotel project. The EPAP No Project condition, therefore, serves as the baseline condition used to assess the significance of near-term project-related traffic impacts.

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Traffic Volume Forecasts

The City of Stockton Travel Demand Model (City of Stockton 2004) was used to develop forecasts of background increases in traffic volumes under near-term EPAP conditions. The increases in traffic volumes reflect development of near-term previously-approved projects in Stockton. The model was modified in the vicinity of the project site to add detail to the model and more accurately represent how land uses are provided access to the roadway network. Forecasted traffic volumes were also adjusted to reflect the recently-approved CarMax project on the west side of Maranatha Drive south of Hammer Lane.

Application of these methods results in the a.m. peak hour and p.m. peak hour intersection traffic volumes presented in the enclosed **Figure 8**.

Intersection Levels of Service

The enclosed **Table 5** presents a.m. peak hour and p.m. peak hour LOS at the four study intersection under EPAP No Project conditions. The worksheets presenting the calculation of LOS are included in the technical appendix.

Traffic volumes under EPAP No Project conditions would be generally higher than under Existing conditions and, as a result, vehicle delay at study intersections under EPAP No Project conditions would be higher than under Existing conditions.

Under EPAP No Project conditions, all four of the study intersections would operate at acceptable LOS C or better during both the a.m. peak hour and the p.m. peak hour. No improvements would be needed at these four intersections to achieve acceptable LOS.

Roadway Segment Level of Service

The enclosed **Table 6** presents a summary of LOS on the three study roadway segments under EPAP No Project conditions.

All of the three study roadway segments operate at acceptable LOS C or better under EPAP No Project conditions. No improvements would be needed on these roadway segments to achieve acceptable LOS.

EXISTING PLUS APPROVED PROJECTS PLUS HAMMER LANE ARCO & HOTEL PROJECT CONDITIONS

EPAP Plus Hammer Lane ARCO & Hotel project conditions represent a near-term future condition with the proposed project. This condition is also referred to in this report as EPAP Plus Project conditions.

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The development of the Hammer Lane ARCO & Hotel project would result in vehicle traffic to and from the project site. The amount of additional traffic on a particular section of the street network depends on three factors:

- Trip Generation, the number of new trips generated by the project;
- Trip Distribution, the direction of travel for the new traffic; and
- Trip Assignment, the specific routes used by the new traffic.

Trip Generation

Development of the Hammer Lane ARCO & Hotel project would generate new vehicle trips and potentially affect traffic operations on study facilities. The number of vehicle trips expected to be generated by the proposed project has been estimated using typical trip generation rates that have been developed based on the nature and size of project land uses. Data compiled by the Institute of Transportation Engineers (ITE) and presented in the publication *Trip Generation Manual, 10th Edition* (Institute of Transportation Engineers 2017) is the primary source of trip generation rates. Additional information on trip generation rates for the proposed car wash land use were collected for this report.

The trip generation rates used in this report are presented in the enclosed **Table 7**. The trip generation rates are applied to the amount of project-related land uses. The resulting trip generation estimates are presented in the enclosed **Table 8**. As shown in **Table 8**, the trip generation estimate has been adjusted to reflect pass-by trips to the project drawn from the flow of background (not project-related) traffic, and internal trips made within the project site (e.g., trips between the hotel and the restaurants).

The pass-by and internal project site trip adjustments were made using methods specified in the ITE document *Trip Generation Handbook, 3rd Edition* (Institute of Transportation Engineers 2014). The *Trip Generation Handbook 3rd Edition* specifies the methods used in applying pass-by, and internal project site trip adjustments. **Table 9** documents the pass-by percentages shown in **Table 8**. The worksheets used to calculate internal project site trip adjustments are presented in the technical appendix.

As shown in **Table 8**, the proposed project would generate an unadjusted 7,275 trips per day, 568 trips during the a.m. peak hour, and 588 trips during the p.m. peak hour. With the pass-by, diverted and internal project site trip adjustments, the proposed project would generate a net 3,747 trips per day, 236 trips during the a.m. peak hour, and 217 trips during the p.m. peak hour.

Trip Distribution

Project-related trips were geographically distributed over the study area roadway network. The distribution of trips is based on the relative attractiveness or utility of possible destinations. Trip distribution percentages applied in this report are presented in the enclosed **Table 9** and are graphically shown in the enclosed **Figure 9**.

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The City of Stockton travel demand model (City of Stockton 2004) was used to estimate trip distribution percentages. The travel demand model is considered to be a valid source for the trip distribution percentages because it directly addresses:

- the location of destinations of project-related trips,
- the magnitude of land uses that would attract project-related trips, and
- the quality of access to the destinations via the roadway network.

A “select link” analysis was conducted using the travel demand model to determine the geographic distribution of project-related travel. The select link analysis identifies vehicle trips associated with the proposed project site, and identifies the direction of travel to and from the project site.

Raw, pre-adjustment, traffic model results used in the development of trip distribution percentages are presented in the technical appendix.

Trip Assignment

Traffic that would be generated by the Hammer Lane ARCO & Hotel project was added to EPAP No Project volumes. The enclosed **Figure 10** displays the project-related-only traffic volumes for each study intersection in the a.m. peak hour and p.m. peak hour. The enclosed **Figure 11** displays the resulting EPAP Plus Project peak hour traffic volumes anticipated for each study intersection. The enclosed **Table 10** displays the resulting EPAP Plus Project daily traffic volumes anticipated for each study roadway segment.

Intersection Levels of Service Impacts

The enclosed **Table 11** presents the a.m. peak hour and p.m. peak hour LOS at each study intersection under EPAP Plus Project conditions. The worksheets presenting the calculation of LOS are included in the technical appendix.

Traffic volumes under EPAP Plus Project conditions would be generally higher than under EPAP No Project conditions and, as a result, vehicle delay at study intersections under EPAP Plus Project conditions would be higher than under EPAP No Project conditions.

Under EPAP Plus Project conditions, LOS at all nine study intersections would be at acceptable LOS C or better during both the a.m. peak hour and the p.m. peak hour. As a result, the impact of the Hammer Lane ARCO & Hotel project on intersection LOS is considered less than significant and no mitigation measures are required.

Roadway Segment Level of Service Impacts

Table 10 presents a summary of LOS on the three study roadway segments under EPAP Plus Project conditions.

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All of the three study roadway segments would operate at acceptable LOS C or better under EPAP Plus Project conditions. As a result, the impact of the Hammer Lane ARCO & Hotel project on roadway segment LOS is considered less than significant and no mitigation measures are required.

INCREASE IN DEMAND FOR PUBLIC TRANSPORTATION

Implementation of the proposed Hammer Lane ARCO & Hotel project would result in an increase in demand for public transportation service. As described earlier in the *Public Transportation* section of this report, SJRTD provides fixed route and Metro Hopper route public transportation service in the vicinity of the project site. The frequency and proximity of future transit service is not known at this time and, as a result, demand for transit cannot be quantified. KDA has communicated with staff at SJRTD regarding current ridership, potential future ridership, and project-related effects. KDA has not been able to acquire these data. However, it is expected that SJRTD can accommodate the additional passengers the proposed project would generate. This is considered a less-than-significant impact. No mitigation measures are required.

INCREASE IN DEMAND FOR BICYCLE AND PEDESTRIAN FACILITIES

Implementation of the Hammer Lane ARCO & Hotel project would result in an increase in demand for bicycle and pedestrian facilities. As noted earlier in the *Bicycle and Pedestrian Facilities* section of this report, striped bicycle lanes are present on the north and south sides of Hammer Lane along the north side of the project site, and extend along Hammer Lane both east and west of the project site. As noted earlier in the *Project Description* section of this report, existing sidewalks are present along the north side of the project site along Hammer Lane. The proposed project would include construction of new sidewalks along Maranatha Drive along the west side of the project site. These sidewalks would improve the safety and convenience of bicycle and pedestrian travel. Therefore, the increase in demand for facilities is considered a less-than-significant impact. No mitigation measures would be required.

VEHICLE MILES TRAVELED IMPACT

As noted earlier in the *Vehicle Miles Traveled Significance Threshold* section of this report, the effects of the proposed project on VMT is determined by comparing travel associated with the Hammer Lane ARCO & Hotel project as proposed to travel associated with development of the project site with the current land use designations.

As noted earlier in the *Project Description* section of this report, the Hammer Lane ARCO & Hotel project site has a Commercial land use designation in the City of Stockton *Envision Stockton 2040 General Plan* (City of Stockton 2018a). The General Plan provides the following description of the Commercial land use designation:

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“Commercial. This designation allows for a wide variety of retail, service, and commercial recreational uses; business, medical, and professional offices; residential uses; public and quasi-public uses; and other similar and compatible uses. Community or regional commercial centers as well as freestanding commercial establishments are permitted.”

The land uses proposed for the Hammer Lane ARCO & Hotel project are consistent with the General Plan Commercial designation described above. Because the proposed project land uses are consistent with the current General Plan land use designations, the VMT generated by the proposed project is considered to be the same as the current General Plan designation. As a result, approval of the proposed project would not result in a change in VMT. Because the Hammer Lane ARCO & Hotel project would not increase VMT, compared to the current land use designation, and based on the criteria presented in the *Vehicle Miles Traveled Impact* section of this report, the proposed project is considered to have a less-than-significant impact on VMT and no mitigation measures are required.

SITE ACCESS AND CIRCULATION

Implementation of the Hammer Lane ARCO & Hotel project would require adequate vehicle access to, and circulation within, the project site.

Sight Distance

Vegetation, structures, and horizontal and vertical curvature can potentially impair the distance at which approaching vehicles can be seen by drivers waiting to depart a project site driveway. This distance is referred to as sight distance. Sight distance determines the amount of time a driver has to execute a maneuver – in the case of the Hammer Lane ARCO & Hotel project, exiting the project site using project site driveways on Hammer Lane, Maranatha Drive, and SR 99 West Frontage Road.

As specified in section 201.1 of the Caltrans *Highway Design Manual* (California Department of Transportation 2019), sight distance has been assessed for this traffic impact study using the Stopping Sight Distance procedures described in section 201.3 of the *Highway Design Manual*.

Table 201.1 of the *Highway Design Manual* presents a description of minimum acceptable stopping sight distances at various speeds. The posted speed limit on Hammer Lane and Maranatha Drive adjacent to the project site is 40 mph. While a posted speed limit is not present along SR 99 West Frontage Road adjacent to the project site, curve advisory speeds are posted at 15 mph at the southwest corner of the project site and 40 mph immediately east of the project site. For this report, a 40 mph speed is assumed for the portion of SR 99 West Frontage Road adjacent to the project site. Per Table 201.1 of the *Highway Design Manual*, at 40 mph, the minimum acceptable stopping distance is 300 feet.

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Figures 12 through Figure 17 show the sight distance view from the location of project site driveways using procedures described in Section 201.3 of the *Highway Design Manual*.

Figure 12 shows the sight distance view looking east on Hammer Lane from the North Project Driveway. The available sight distance would extend to the SR 99 overcrossing, approximately 1,400 feet. The available sight distance would exceed the minimum acceptable sight distance of 300 feet. Therefore, this impact is considered less than significant, and no mitigation measures are required.

Figure 13 shows the sight distance view looking west on Hammer Lane from the North Project Driveway. The available sight distance would extend through the intersection of Hammer Lane & Maranatha Drive to a distance of approximately 800 feet. This distance would exceed the minimum acceptable sight distance of 300 feet. Therefore, this impact is considered less than significant, and no mitigation measures are required.

Figure 14 shows the sight distance view looking north on Maranatha Drive from the Northwest Project Driveway. The available sight distance would extend through the intersection of Hammer Lane & Maranatha Drive to a distance exceeding 1,200 feet. This distance would exceed the minimum acceptable sight distance of 300 feet. Therefore, this impact is considered less than significant, and no mitigation measures are required.

Figure 15 shows the sight distance view looking south on Maranatha Drive from the Southwest Project Driveway. The available sight distance currently extends to the barricade at the southern terminus of Maranatha Drive. With extension Maranatha Drive to the south, available sight distance would be increased. While the increased sight distance cannot be quantified, the distance would be considered to exceed the minimum acceptable sight distance of 300 feet. Therefore, this impact is considered less than significant, and no mitigation measures are required.

Figure 16 shows the sight distance view looking west on SR 99 West Frontage Road from the South Project Driveway. The available sight distance would extend to the western terminus of SR 99 West Frontage Road, to a distance of approximately 350 feet. This distance would exceed the minimum acceptable sight distance of 300 feet. Therefore, this impact is considered less than significant, and no mitigation measures are required.

Figure 17 shows the sight distance view looking east on SR 99 West Frontage Road from the South Project Driveway. The available sight distance would extend to the horizontal curve in SR 99 West Frontage Road, to a distance of approximately 800 feet. This distance would exceed the minimum acceptable sight distance of 300 feet. Therefore, this impact is considered less than significant, and no mitigation measures are required.

Truck Turning Path Analysis

The Hammer Lane ARCO & Hotel project would not generate a large number of truck trips. However, because of their relatively large turning radius, fuel trucks may be unable to connect

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with fuel delivery points without traveling outside of project site driveway curb cuts, or traveling outside of on-site driveways.

A truck turning path analysis was conducted to assess the ability of fuel trucks to access the project site and connect with fuel delivery points without traveling outside of designated driveways. **Figure 18** presents the results of this assessment.

The truck turning path analysis assumes fuel delivery trucks would use SR 99 and Hammer Lane east of the project site to approach and depart the project site. The red area in **Figure 18** shows the path of fuel trucks approaching the fuel delivery points. The green area in **Figure 18** shows the path of fuel trucks departing the fuel delivery points.

As shown in **Figure 18**, fuel delivery trucks would be able to approach the fuel delivery points, deliver fuel, and depart the fuel delivery points without traveling outside of designated driveways. As a result, this impact is considered less than significant. No mitigation measures are required.

Hammer Lane & North Project Driveway Inbound Right-Turn

Peak hour traffic volumes under EPAP Plus Project conditions are shown in **Figure 10**. This figure includes traffic volumes at Intersection 5, Hammer Lane & the North Project Driveway. As shown in this figure, traffic volumes on the eastbound-to-southbound inbound right-turn movement at this intersection would be 201 vehicles per hour in the a.m. peak hour and 159 vehicles per hour in the p.m. peak hour. Eastbound through movement volumes would be 1,907 vehicles per hour in the a.m. peak hour and 2,234 vehicles per hour in the p.m. peak hour.

As described earlier in the *Existing Plus Approved Projects Plus Hammer Lane ARCO & Hotel Project Conditions* section of this report, LOS would be acceptable at Intersection 5, Hammer Lane & the North Project Driveway. However, with the traffic volumes described in the paragraph immediately above and the 40 mph speed limit on Hammer Lane, vehicles slowing down to make the eastbound-to-southbound right-turn movement into the project site could potentially conflict with vehicles traveling at full speed making the eastbound through movement.

Spatially separating vehicles slowing down to make a right-turn movement from full-speed through-movement vehicles would reduce potential conflicts. Quantitative thresholds for determining when spatial separation of vehicles is warranted are not commonly available and quantitative thresholds have not been identified by the City of Stockton. However, right-turn lanes serving inbound movements to private driveways are currently present along Hammer Lane west of the project site.

In light of traffic volumes at Hammer Lane & the North Project Driveway and the speed limit on Hammer Lane, an eastbound-to-southbound right-turn lane at this location is recommended. The right-turn lane would provide spatial separation between vehicles making the inbound right turn

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movement and vehicles making the through movement, and would avoid the potential of conflict between these vehicles.

CLOSING

Thank you for providing KD Anderson & Associates with the opportunity to provide traffic analysis services on the Hammer Lane ARCO & Hotel project. If you have any questions regarding this report, please contact me at wshijo@kdanderson.com or call me at 916-205-7032.

Sincerely yours,

KD Anderson & Associates, Inc.

A handwritten signature in black ink, appearing to read 'Wayne Shijo', with a stylized, cursive script.

Wayne Shijo
Project Manager

enclosures

KDA

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PERSONAL COMMUNICATIONS

Burkett, David, AIA. Principal Architect. Red Inc Architects. August 30, 2019 E-mail message to Charlie Simpson, BaseCamp Environmental.

Mann, Sandy. CEO. Elite Business Enterprises. December 30, 2019 E-mail message to Wayne Shijo, KD Anderson & Associates.

Table 1. Level of Service Definitions - Highway Capacity Manual 2010

Level of Service	Signalized Intersections	Unsignalized Intersections
A	Vehicle progression is exceptionally favorable or the cycle length is very short. Delay ≤ 10.0 seconds/vehicle	Little or no delay. Delay ≤ 10 seconds/vehicle
B	Vehicle progression is highly favorable or the cycle length is short. Delay > 10 seconds/vehicle and ≤ 20 seconds/vehicle	Short traffic delays. Delay > 10 seconds/vehicle and ≤ 15 seconds/vehicle
C	Vehicle progression is favorable or the cycle length is moderate. Individual cycle failures may begin to appear at this level. Delay > 20 seconds/vehicle and ≤ 35 seconds/vehicle	Average traffic delays. Delay > 15 seconds/vehicle and ≤ 25 seconds/vehicle
D	Vehicle progression is ineffective or the cycle length is long. Many vehicles stop and the individual cycle failures are noticeable. Delay > 35 seconds/vehicle and ≤ 55 seconds/vehicle	Long traffic delays. Delay > 25 seconds/vehicle and ≤ 35 seconds/vehicle
E	Vehicle progression is unfavorable and the cycle length is long. Individual cycle failures are frequent. Delay > 55 seconds/vehicle and ≤ 80 seconds/vehicle	Very long traffic delays, failure, extreme congestion. Delay > 35 seconds/vehicle and ≤ 50 seconds/vehicle
F	Vehicle progression is very poor and the cycle length is long. Most cycles fail to clear the vehicle queue. Delay > 80 seconds/vehicle	Intersection blocked by external causes. Delay > 50 seconds/vehicle
Source: Transportation Research Board 2010.		

Table 2. City of Stockton General Plan Roadway Segment Level of Service Thresholds

Facility Class	Number of Lanes	Area Type	Level of Service				
			A	B	C	D	E
Freeway	4	All Areas	27,600	45,200	63,600	77,400	86,400
	6	All Areas	41,400	67,800	95,400	116,100	129,600
	8	All Areas	55,200	90,400	127,200	154,800	172,800
	10	All Areas	69,000	113,000	159,000	193,500	216,000
Arterial	2	Existing	8,400	9,300	11,800	14,700	17,300
	2	New	10,000	11,100	14,000	17,500	20,600
	4	Existing	18,600	20,600	26,000	32,500	38,200
	4	New	23,300	25,800	32,600	40,700	47,900
	6	Existing	28,800	32,000	40,300	50,400	59,300
	6	New	33,300	37,000	46,600	58,300	68,600
	8	Existing	38,100	42,300	53,300	66,600	78,400
	8	New	41,100	45,700	57,600	72,000	84,700
Collector	2	Existing	6,400	7,100	9,000	11,300	13,200
	2	New	6,400	7,100	9,000	11,300	13,200
	4	Existing	17,600	19,600	24,700	30,900	36,300
	4	New	21,100	23,500	29,600	37,000	43,500

Source: Stockton General Plan Draft Environmental Impact Report (City of Stockton 2018b).
Note: The Stockton General Plan does not provide thresholds for local roads.

**Table 3. Roadway Segment Level of Service -
Existing Conditions**

Roadway Segment	Number of Lanes	Daily Capacity	Daily Volume	V/C Ratio	Level of Service
1 Hammer Lane - Holman Road to Maranatha Drive	8	78,400	41,838	0.53	B
2 Hammer Lane - Maranatha Drive to SR 99 SB Ramps	8	78,400	42,936	0.55	C
3 Maranatha Drive - south of Hammer Lane	2	17,300	655	0.04	A
Notes: "V/C Ratio" = volume-to-capacity ratio.					

Table 4. Intersection Level of Service - Existing Conditions

Study Intersections	Inters. Control	Signal Warrant Met?	AM Peak		PM Peak	
			LOS	Delay	LOS	Delay
1 Hammer Lane & Maranatha Drive	Signal		B	14.9	B	15.1
2 Hammer Lane & Moreland Street	Unsig	No	A	0.2	A	0.2
3 Hammer Lane & SR 99 Southbound Ramps	Signal		B	18.3	B	15.8
4 Hammer Lane & SR 99 Northbound Ramps	Signal		C	24.7	C	28.6
5 Hammer Lane & North Project Driveway	--		--	--	--	--
6 Hammer Lane & Northeast Project Driveway	--		--	--	--	--
7 Maranatha Drive & Northwest Project Driveway	--		--	--	--	--
8 Maranatha Drive & Southwest Project Driveway	--		--	--	--	--
9 SR 99 West Frontage Road & South Project Driveway	--		--	--	--	--

Notes: "SR" = State Route. "LOS" = Level of Service. "Inters. Control" = Type of intersection control.
"Signal" = Signalized light control. "Unsig" = Unsignalized stop-sign control.
Delay is measured in seconds per vehicle.
Per City of Stockton guidelines, intersection average delay is reported for all intersections, including unsignalized intersections.
Dashes (--) indicate the intersection would not be present under this scenario.

Table 5. Intersection Level of Service - EPAP No Project Conditions

Study Intersections	Inters. Control	Signal Warrant Met?	AM Peak		PM Peak	
			LOS	Delay	LOS	Delay
1 Hammer Lane & Maranatha Drive	Signal		B	17.1	C	20.3
2 Hammer Lane & Moreland Street	Unsig	No	A	0.2	A	0.2
3 Hammer Lane & SR 99 Southbound Ramps	Signal		B	11.3	B	13.9
4 Hammer Lane & SR 99 Northbound Ramps	Signal		C	24.0	C	28.4
5 Hammer Lane & North Project Driveway	--		--	--	--	--
6 Hammer Lane & Northeast Project Driveway	--		--	--	--	--
7 Maranatha Drive & Northwest Project Driveway	--		--	--	--	--
8 Maranatha Drive & Southwest Project Driveway	--		--	--	--	--
9 SR 99 West Frontage Road & South Project Driveway	--		--	--	--	--

Notes: "SR" = State Route. "LOS" = Level of Service. "Inters. Control" = Type of intersection control.
"Signal" = Signalized light control. "Unsig" = Unsignalized stop-sign control.
Delay is measured in seconds per vehicle.
Per City of Stockton guidelines, intersection average delay is reported for all intersections, including unsignalized intersections.
Dashes (- -) indicate the intersection would not be present under this scenario.

**Table 6. Roadway Segment Level of Service -
Existing Plus Approved Projects No Project Conditions**

Roadway Segment	Number of Lanes	Daily Capacity	Daily Volume	V/C Ratio	Level of Service
1 Hammer Lane - Holman Road to Maranatha Drive	8	78,400	47,411	0.60	C
2 Hammer Lane - Maranatha Drive to SR 99 SB Ramps	8	78,400	48,632	0.62	C
3 Maranatha Drive - south of Hammer Lane	2	17,300	3,224	0.19	A
<hr/> Notes: "V/C Ratio" = volume-to-capacity ratio.					

Table 7. Trip Generation Rates for the Hammer Lane ARCO and Hotel Project

Land Use Category and ITE Land Use Code	Independent Variable	Vehicle Trip Rates						
		AM Peak Hour				PM Peak Hour		
		Daily	In	Out	Total	In	Out	Total
Black Bear Diner (ITE 932 - High Turnover [Sit-Down] Restaurant)	1,000 Sq. Ft	112.18	5.47	4.47	9.94	6.06	3.71	9.77
Sonic Drive-In Restaurant (ITE 934 - Fast-Food Restaurant with Drive-Through Window)	1,000 Sq. Ft	470.95	20.50	19.69	40.19	16.99	15.68	32.67
Tunnel Car Wash (ITE 948 - Automated Car Wash)	Tunnel	503.00	20.00	14.00	34.00	39.00	39.00	78.00
am/pm Convenience Store (ITE 960 - Super Convenience Market/Gas Station)	Vehicle Fueling Positions and 1,000 Sq. Ft	230.52	N/A	N/A	N/A	N/A	N/A	N/A
Fairfield Inn & Suites / Townplace Suites (ITE 310 - Hotel)	Rooms	8.36	0.28	0.19	0.47	0.31	0.29	0.60

Source: Institute of Transportation Engineers 2017.

Notes: Totals may not equal the sum of the components due to rounding. N/A = not applicable, see immediately below.

Peak hour trip generation for ITE 960 - Super Convenience Market/Gas Station based on multi-variable regression analysis.

Daily and a.m. peak hour data are not available for ITE 948 - Automated Car Wash in Institute of Transportation Engineers 2017.

Daily and peak hour trip generation count data were collected at existing car wash facilities by KD Anderson & Associates to validate and supplement data in Institute of Transportation Engineers 2017 for ITE 948 - Automated Car Wash.

Table 8. Trip Generation Estimates for the Hammer Lane ARCO and Hotel Project

Land Use Category and ITE Land Use Code	Amount of Land Use	Vehicle Trips						
		Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Black Bear Diner (ITE 932 - High Turnover [Sit-Down] Restaurant)	5,338 1,000 Sq. Ft	599	29	24	53	32	20	52
Sonic Drive-In Restaurant (ITE 934 - Fast-Food Restaurant with Drive-Through Window)	2,720 1,000 Sq. Ft	1,281	56	54	109	46	43	89
Tunnel Car Wash (ITE 948 - Automated Car Wash)	1 Tunnel	503	20	14	34	39	39	78
am/pm Convenience Store (ITE 960 - Super Convenience Market/Gas Station)	16 Vehicle Fueling Positions and 3,922 1,000 Sq. Ft	3,688	152	152	304	142	142	283
Fairfield Inn & Suites / Townplace Suites (ITE 310 - Hotel)	144 Rooms	1,204	40	27	68	45	42	86
Unadjusted Subtotal		7,275	297	271	568	304	286	588
Pass-By and Mixed Land Use Internal Trip Reductions								
Black Bear Diner (ITE 932 - High Turnover [Sit-Down] Restaurant)		-90	-4	-4	-8	-14	-9	-22
Sonic Drive-In Restaurant (ITE 934 - Fast-Food Restaurant with Drive-Through Window)		-628	-27	-26	-53	-23	-22	-45
Tunnel Car Wash (ITE 948 - Automated Car Wash)		-75	-3	-2	-5	-6	-6	-12
am/pm Convenience Store (ITE 960 - Super Convenience Market/Gas Station)		-2,065	-94	-94	-188	-80	-80	-158
Mixed Land Use Internal Trip Reduction (For calculation, see the technical appendix)		-670	-39	-39	-78	-67	-67	-134
Adjusted Total		3,747	130	106	236	114	102	217

Notes: Totals may not equal the sum of the components due to rounding. Mixed land use internal trip reduction based on Institute of Transportation Engineers 2017. Pass-by percentages based on Institute of Transportation Engineers 2017, and Caltrans 2002.

Table 9 - Pass-by Trip Percentages

Land Use Category and ITE Land Use Code		Time Period		
		Daily	AM Peak Hour	PM Peak Hour
Black Bear Diner - ITE 932 - High Turnover [Sit-Down] Restaurant	Pass-By Percent	15%	15%	43%
	Source		Caltrans 2002	ITE 2014
Sonic Drive-In Restaurant - ITE 934 - Fast Food Restaurant with Drive-Through Window	Pass-By Percent	49%	49%	50%
	Source		ITE 2014	ITE 2014
Tunnel Car Wash - ITE 948 - Automated Car Wash	Pass-By Percent	15%	15%	15%
	Source		Caltrans 2002	Caltrans 2002
am/pm Convenience Store - ITE 960 - Super Convenience Market/Gas Station	Pass-By Percent	56%	62%	56%
	Source		ITE 2014 (Land Use 945)	ITE 2014 (Land Use 945)
<p>Notes: "ITE" = Institute of Transportation Engineers.</p> <p>No data available for ITE land use code 960. Data for land use code 945 applied.</p> <p>No data available for daily period. The lower of a.m. peak hour and p.m. peak hour applied.</p>				

Table 10. Project Trip Distribution Percentages

Direction of Travel or Destination	Percent of Project-Related Trips
North on Maranatha Drive	13%
North on State Route 99	7%
West on Hammer Lane	59%
East on Hammer Lane	4%
South on State Route 99 West Frontage Road	1%
South on State Route 99	16%
TOTAL	100%
Source: Select link analysis using the Stockton General Plan Travel Demand Model.	

**Table 11. Roadway Segment Level of Service -
Existing Plus Approved Projects Plus Project Conditions**

Roadway Segment	Number of Lanes	Daily Capacity	Daily Volume	V/C Ratio	Level of Service
1 Hammer Lane - Holman Road to Maranatha Drive	8	78,400	49,624	0.63	C
2 Hammer Lane - Maranatha Drive to SR 99 SB Ramps	8	78,400	49,645	0.63	C
3 Maranatha Drive - south of Hammer Lane	2	17,300	4,158	0.24	A
<hr/> Notes: "V/C Ratio" = volume-to-capacity ratio.					

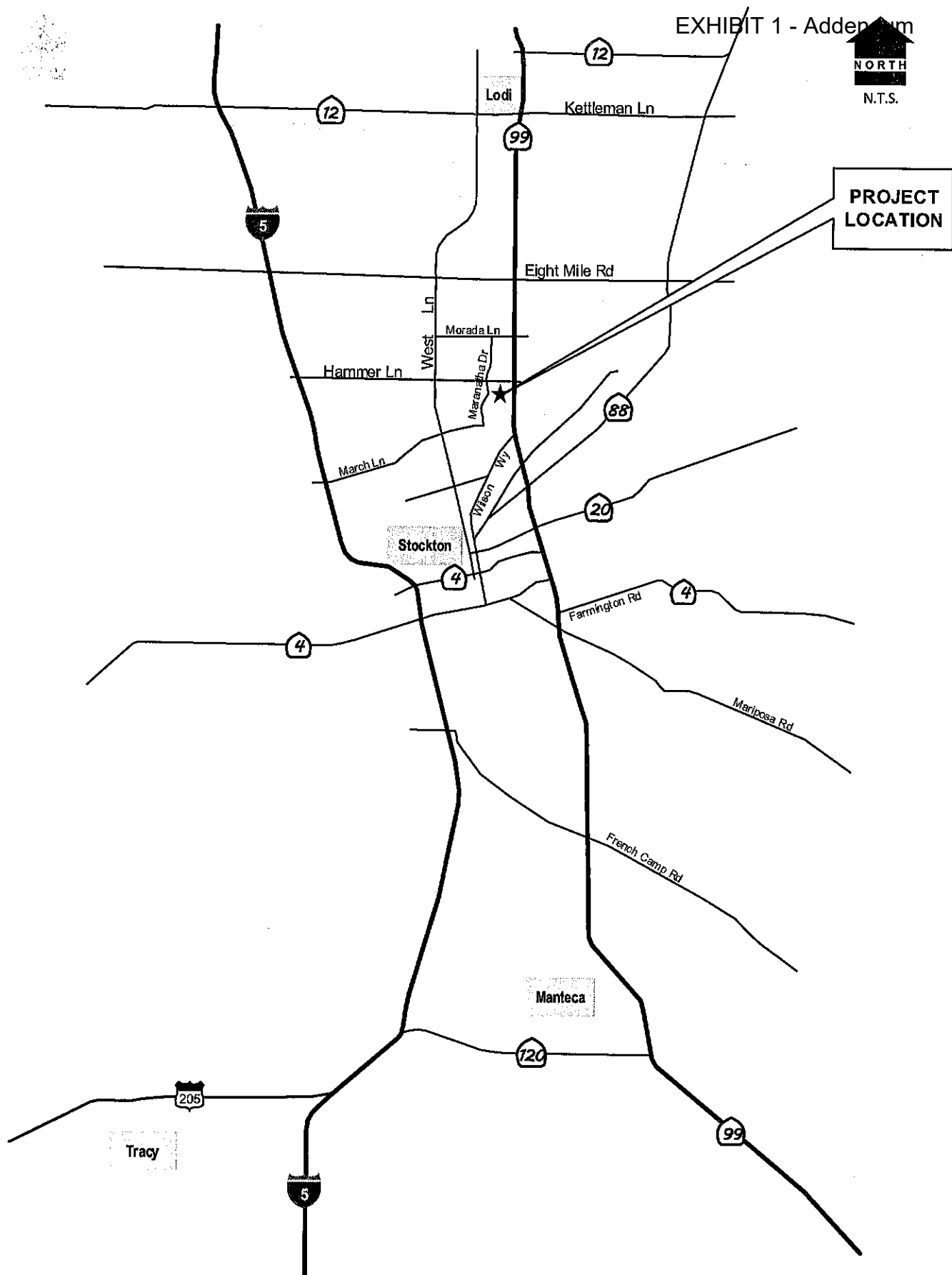
Table 12. Intersection Level of Service - EPAP Plus Project Conditions

Study Intersections	Inters. Control	Signal Warrant Met?	AM Peak		PM Peak	
			LOS	Delay	LOS	Delay
1 Hammer Lane & Maranatha Drive	Signal		C	21.6	C	24.2
2 Hammer Lane & Moreland Street	Unsig	No	A	0.2	A	0.2
3 Hammer Lane & SR 99 Southbound Ramps	Signal		B	11.4	B	14.0
4 Hammer Lane & SR 99 Northbound Ramps	Signal		C	24.0	C	28.4
5 Hammer Lane & North Project Driveway	Unsig	No	A	0.4	A	0.3
6 Hammer Lane & Northeast Project Driveway	Unsig	No	A	<0.1	A	<0.1
7 Maranatha Drive & Northwest Project Driveway	Unsig	No	A	3.5	A	1.5
8 Maranatha Drive & Southwest Project Driveway	Unsig	No	A	1.1	A	0.8
9 SR 99 West Frontage Road & South Project Driveway	Unsig	No	A	0.9	A	0.8

Notes: "SR" = State Route. "LOS" = Level of Service. "Inters. Control" = Type of intersection control.
"Signal" = Signalized light control. "Unsig" = Unsignalized stop-sign control.
Delay is measured in seconds per vehicle.
Per City of Stockton guidelines, intersection average delay is reported for all intersections, including unsignalized intersections.

TABLE 5
STOCKTON GENERAL PLAN - ROADWAY OPERATIONS

Segment ID	Roadway	Between	Base Year				2040 Plus Project				Change: Base to Future	
			ADT ¹	Lanes ²	Classification	LOS	ADT ¹	Lanes ²	Classification	LOS	ADT	Lanes
43	Morada Lane	Mosher Creek	16,160	6	Collector	A	17,900	4	Collector	A	1,740	-2
44	Hammer Lane	Mariners Dr	17,010	6	Arterial	A	23,200	6	Arterial	A	6,190	0
45	Hammer Lane	Westland	31,960	6	Arterial	B	35,300	6	Arterial	B	3,340	0
46	Hammer Lane	Pershing Ave	28,610	4	Arterial	D	29,600	6	Arterial	A	990	2
47	Hammer Lane	Lower Sacramento Rd	41,780	8	Arterial	B	31,300	6	Arterial	A	-10,480	-2
48	Hammer Lane	At WPRR	48,730	8	Arterial	C	31,600	6	Arterial	A	-17,130	-2
49	Hammer Lane	SPRR	42,060	8	Arterial	B	29,200	6	Arterial	A	-12,860	-2
50	Hammer Lane	Holman Rd	40,360	8	Arterial	B	32,500	6	Arterial	A	-7,860	-2
51	Benjamin Holt Drive	Plymouth	22,630	2	Arterial	F	21,500	2	Arterial	F	-1,130	0
52	Benjamin Holt Drive	Vicksburg	16,380	2	Arterial	E	15,200	2	Arterial	D	-1,180	0
53	Swain Rd	Plymouth Road	10,690	2	Local	A	10,700	2	Local	A	10	0
54	Swain Rd	Pershing Avenue	9,670	2	Local	A	9,500	2	Local	A	-170	0
55	March Lane	Brookside Rd	6,950	6	Arterial	A	8,800	6	Arterial	A	1,850	0
56	March Lane	Feather River Drive	40,100	6	Arterial	C	43,800	6	Arterial	C	3,700	0
57	March Lane	Quail Lakes	43,050	6	Arterial	D	42,400	6	Arterial	C	-650	0
58	March Lane	Pershing Ave	42,910	6	Arterial	D	41,100	6	Arterial	C	-1,810	0
59	March Lane	Pacific Ave	33,060	6	Arterial	C	41,100	6	Arterial	C	8,040	0
60	March Lane	At UPRR	38,800	6	Arterial	C	58,300	6	Arterial	E	19,500	0
61	March Lane	West Lane	28,720	8	Arterial	A	72,700	6	Arterial	F	43,980	-2
62	Alpine Avenue	Pershing	9,140	4	Local	A	8,900	2	Local	A	-240	-2





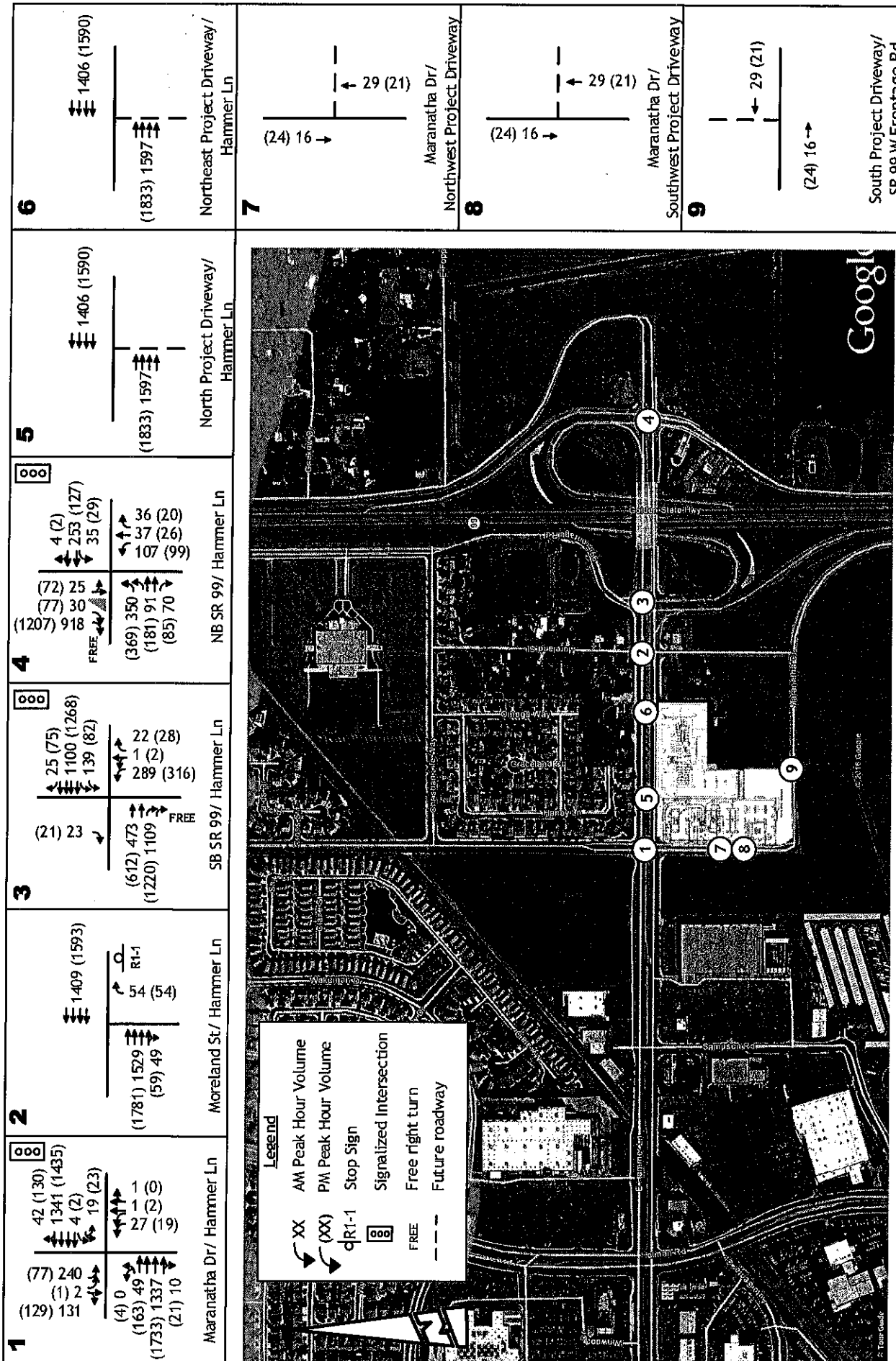
VICINITY MAP

figure 2

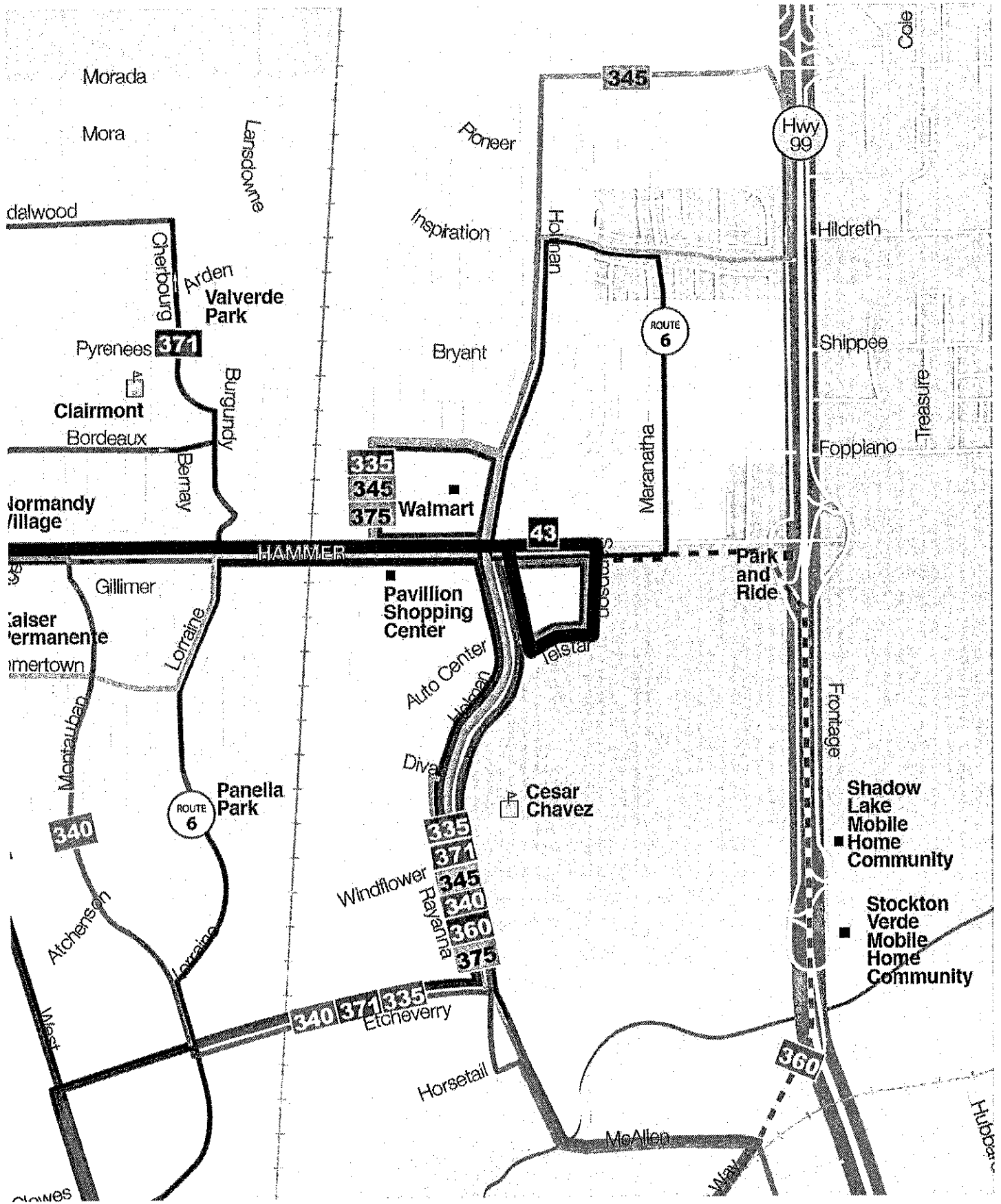


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SITE PLAN - WEST PORTION

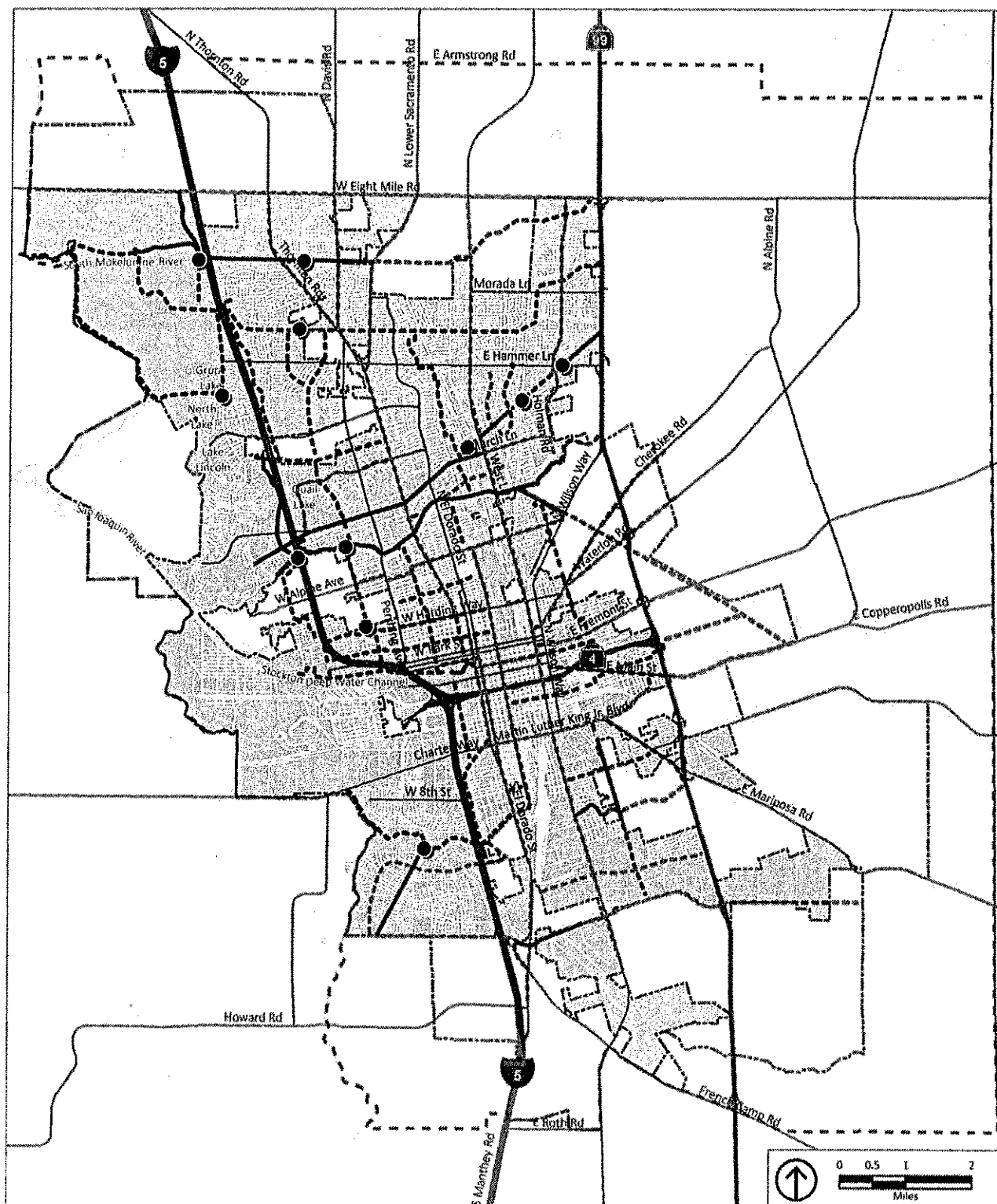


EXISTING TRAFFIC VOLUMES AND LANE CONFIGURATIONS



EXISTING TRANSIT SYSTEM

Source: San Joaquin Regional Transit District 2020

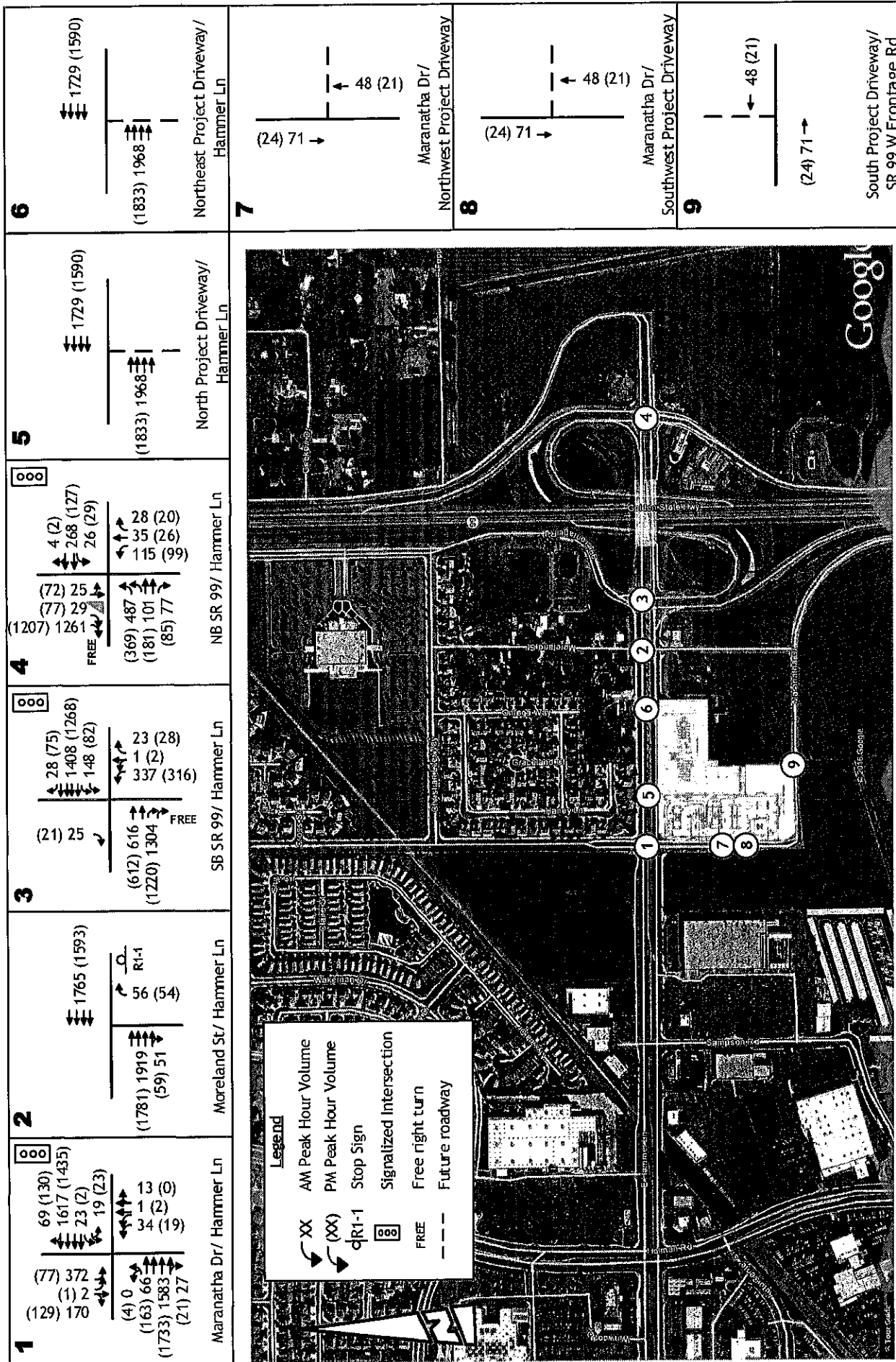


Source: City of Stockton; Fehr & Peers, 2016; PlaceWorks, 2017.

- | | | |
|--------------------------|------------------------------------|------------------------------|
| Existing Bicycle Network | Planned Bicycle Network | ● New Bridge |
| — Class I (Bike Path) | ----- Class I (Bike Path) | ▭ General Plan Planning Area |
| — Class II (Bike Lane) | ----- Class II (Bike Lane) | ▭ City Limit |
| | ----- Class III (Bike Route) | ▭ Sphere of Influence |
| | ----- Class IV (Separated Bikeway) | |

ENVISION STOCKTON 2040 GENERAL PLAN

EXISTING AND PLANNED BICYCLE NETWORK



EPAP WITHOUT PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS

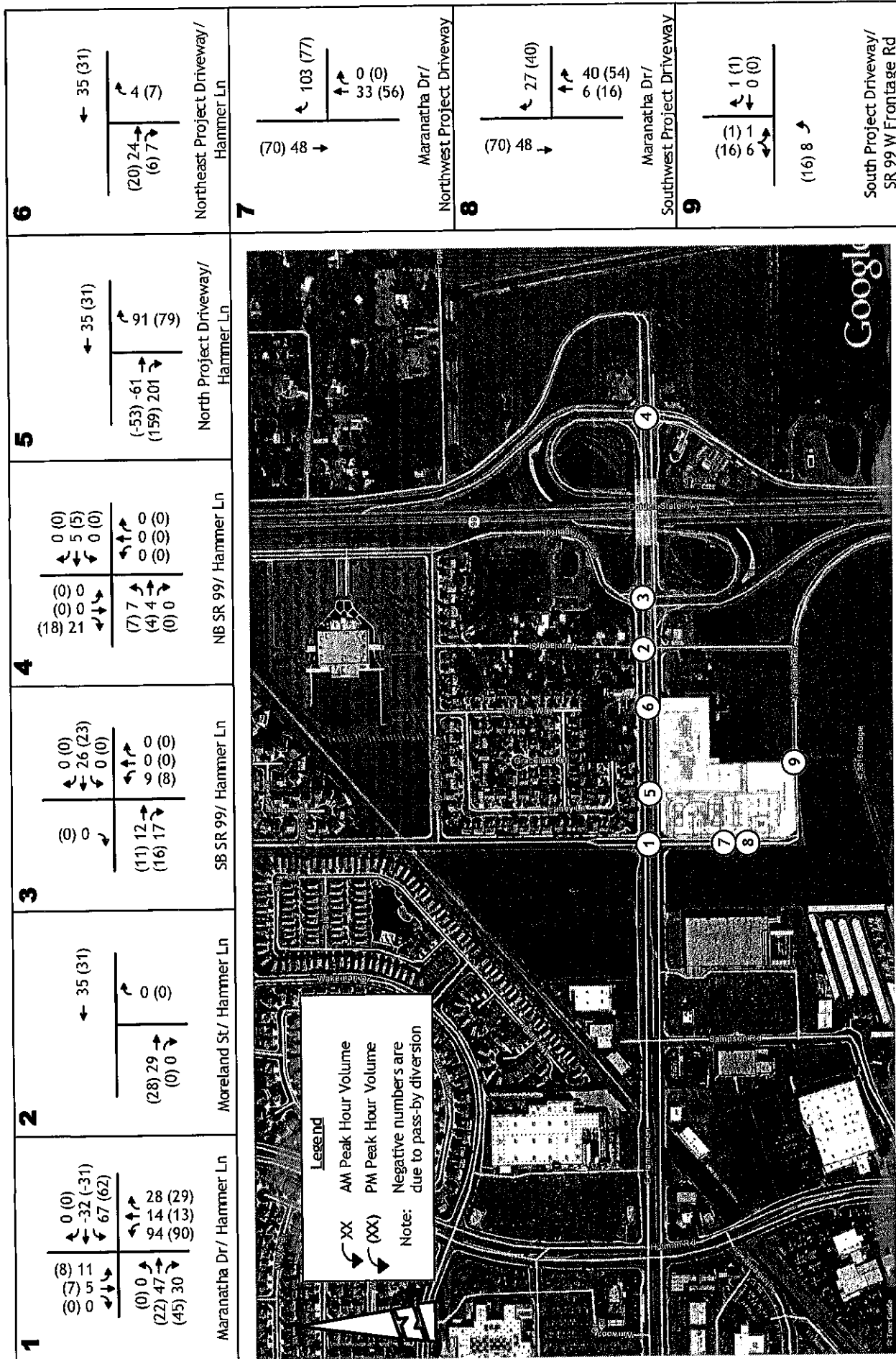


figure 9

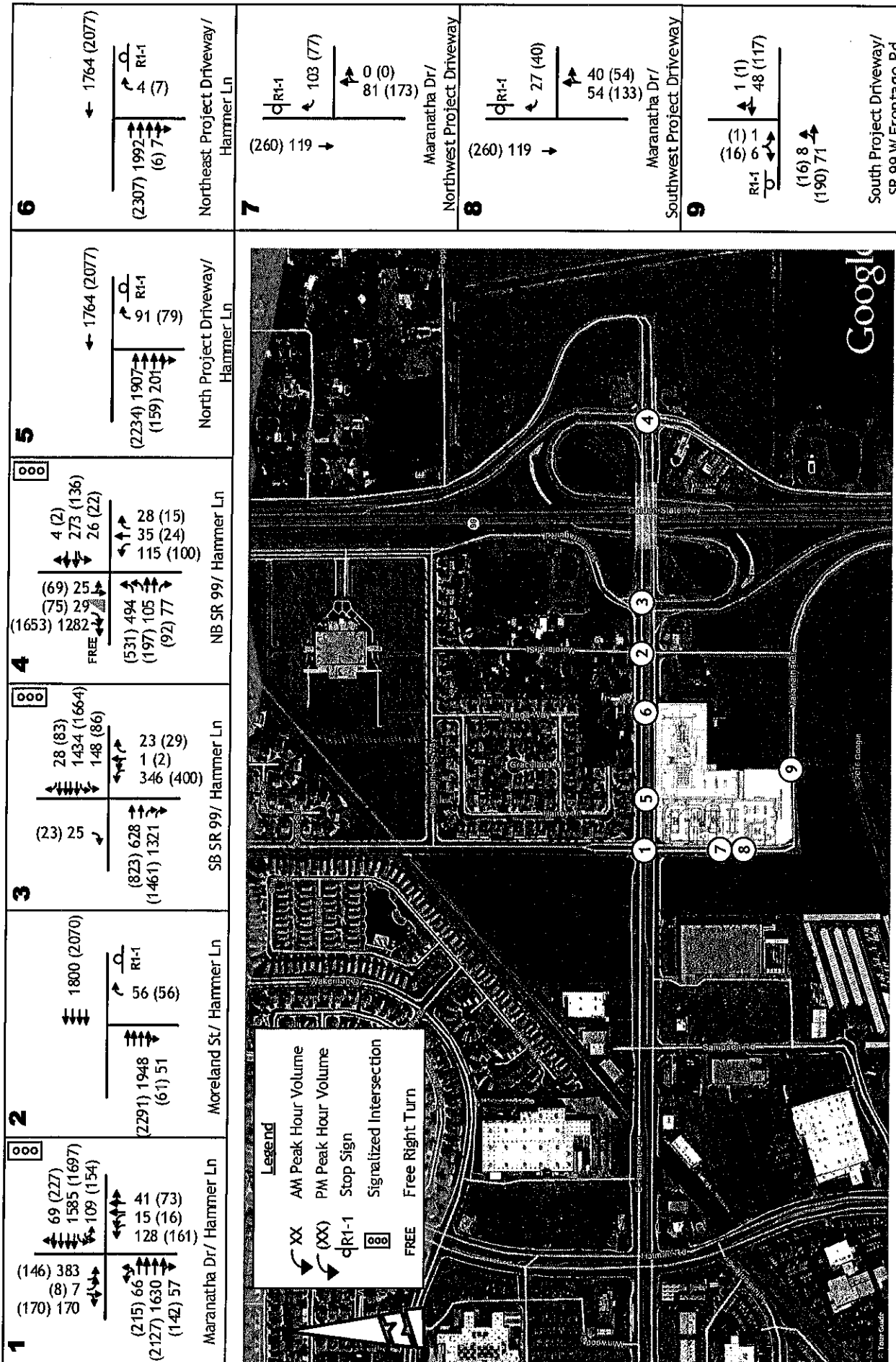
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PROJECT RELATED TRIPS



EPAP PLUS PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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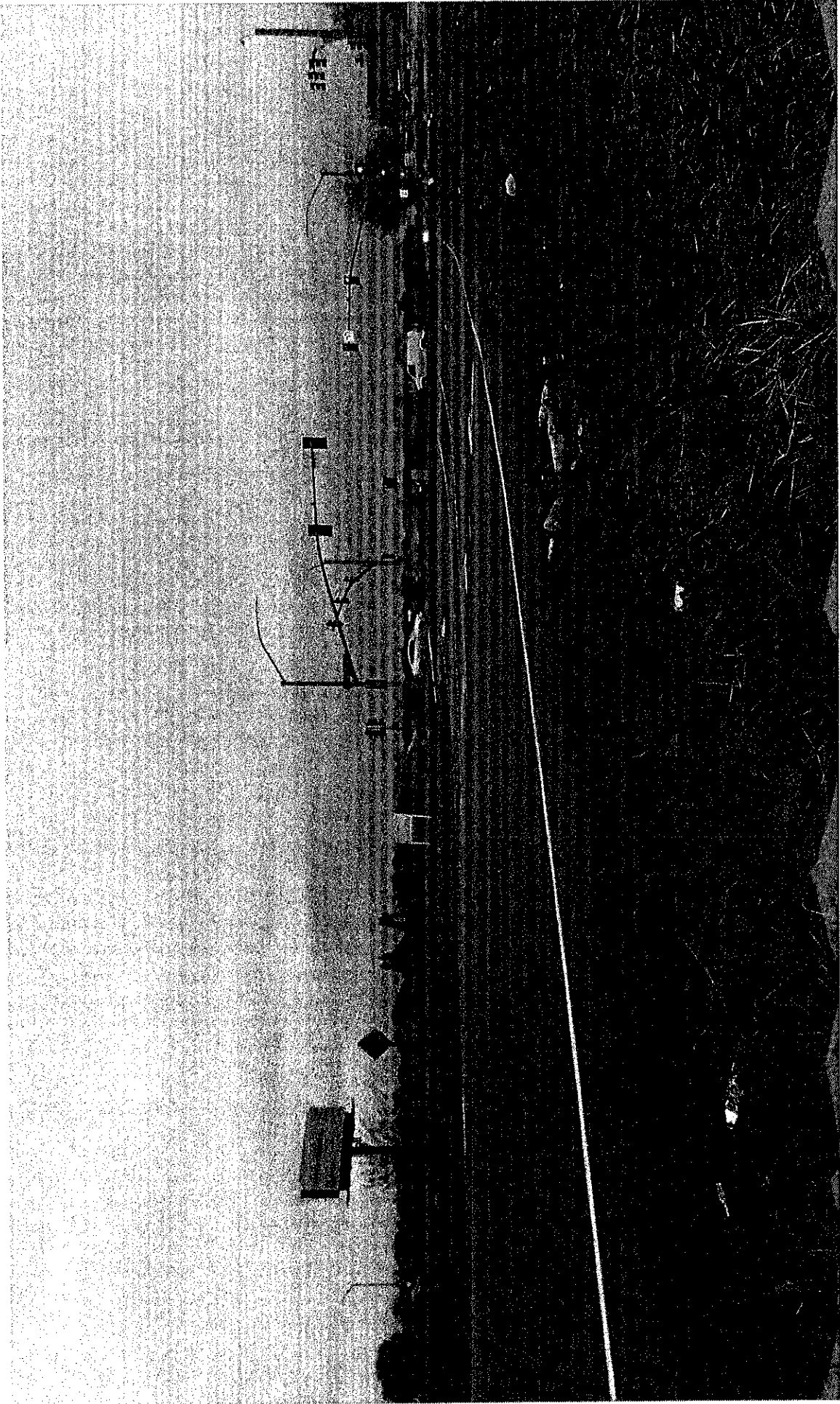


VIEW LOOKING EAST ON HAMMER LANE FROM THE NORTH PROJECT DRIVEWAY

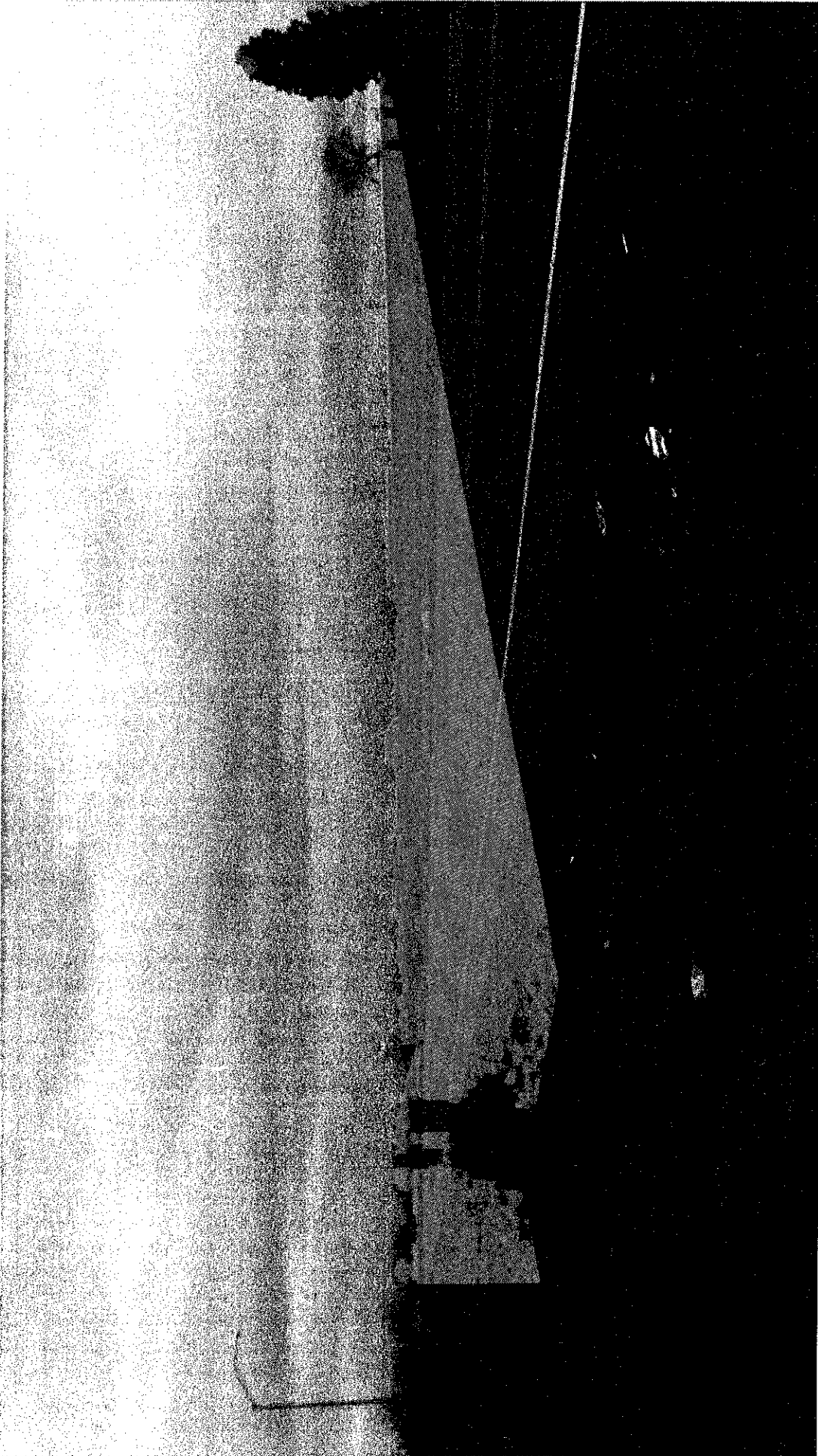


VIEW LOOKING WEST ON HAMMER LANE FROM THE NORTH PROJECT DRIVEWAY

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VIEW LOOKING NORTH ON MARANATHA DRIVE
FROM THE NORTHWEST PROJECT DRIVEWAY



VIEW LOOKING SOUTH ON MARANATHA DRIVE
FROM THE SOUTHWEST PROJECT DRIVEWAY



VIEW LOOKING WEST ON SR 99 WEST FRONTAGE ROAD
FROM THE SOUTH PROJECT DRIVEWAY



VIEW LOOKING EAST ON SR 99 WEST FRONTAGE ROAD
FROM THE SOUTH PROJECT DRIVEWAY

