

June 2020 | Draft Environmental Impact Report  
State Clearinghouse No. 2017081003

# WILSON MIDDLE SCHOOL MULTI-PURPOSE FIELD PROJECT

Glendale Community Services and Parks

Volume II: Draft EIR Appendices

*Prepared for:*

**City of Glendale**

Contact: Peter Vierheilig, Project Manager  
613 East Broadway, Room 120  
Glendale, California 91206  
818.548.2000

*Prepared by:*

**PlaceWorks**

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## Appendices

### **Appendix A1    NOP/Initial Study**

## Appendices

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# NOTICE OF PREPARATION OF ENVIRONMENTAL IMPACT REPORT AND SCOPING MEETING

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## WILSON MIDDLE SCHOOL MULTI-PURPOSE FIELD PROJECT

**TO:** Agencies, Organizations, and Interested Parties **DATE:** August 1, 2017

**FROM:** Glendale Community Services & Parks (Lead Agency)

**SUBJECT:** Notice of Preparation of a Draft Environmental Impact Report in Compliance with Title 14, Section 15082(a) of the California Code of Regulations and Notice of Scoping Meeting

The City of Glendale Community Services & Parks Department (City) has partnered with the Glendale Unified School District (GUSD) to develop a multi-purpose field with sports field lighting on the campus of Wilson Middle School (Wilson MS). The City of Glendale will serve as the Lead Agency for the proposed project in accordance with the California Environmental Quality Act (CEQA), Section 15051(c) in the preparation of the Environmental Impact Report (EIR) for the Wilson Middle School Multi-Purpose Field Project (project) as described below. The City is requesting identification of environmental issues and information that you or your organization believes should be considered in the EIR.

**PROJECT TITLE:** Wilson Middle School Multi-Purpose Project

**PUBLIC REVIEW PERIOD:** August 1, 2017 – September 1, 2017

**RESPONSES AND COMMENTS:** Please send your responses and comments to: Peter Vierheilig, Project Manager, City of Glendale Community Services & Parks Department. Phone Number: 818.548.2000. Mailing Address: City of Glendale Community Services & Parks Department, 613 East Broadway Rm 120, Glendale, California 91206, or via email at [PVierheilig@Glendaleca.gov](mailto:PVierheilig@Glendaleca.gov), with the subject heading: **Wilson Middle School Multi-Purpose Project**. Please include the name, phone number, and email address of a contact person in all responses submitted.

**SCOPING MEETING:** The City will host a Scoping Meeting for the project to receive comments on the scope and content of the proposed EIR. You are welcome to attend and present environmental information that you believe should be considered in the EIR. The meeting is scheduled for:

**Date:** August 17, 2017  
**Time:** 6:30 p.m. – 8:00 p.m.  
**Place:** Wilson Middle School Library  
1221 Monterey Road  
Glendale, CA 91206

**AGENCIES:** The City requests your agency's views on the scope and content of the environmental information relevant to your agency's statutory responsibilities in connection with the proposed project, in accordance with California Code of Regulations, Title 14, Section 15082(b). Your agency will need to use the EIR prepared by the District when considering your permit or other approval for the project.

**ORGANIZATIONS AND INTERESTED PARTIES:** The District requests your comments and concerns regarding the environmental issues associated with construction and operation of the proposed project.

**PROJECT LOCATION:** The Wilson Middle School campus is located at 1221 Monterey Road in the City of Glendale, Los Angeles County, CA. The proposed project would occur at the existing on-site athletic field, which is located along the northern perimeter of the Wilson Middle School campus. The campus is approximately 0.13 mile north of State Route 134. The proposed project would disturb approximately 3.85 acres – consisting of the existing athletic field and basketball courts – along the northern portion of the Wilson MS campus. The proposed project would not impact other areas of the campus. The project site is bounded by multi-family residential uses to the north (fronting East Glenoaks Boulevard), Wilson MS campus buildings, including classrooms and administrative buildings

# NOTICE OF PREPARATION OF ENVIRONMENTAL IMPACT REPORT AND SCOPING MEETING

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(fronting Monterey Road) to the south, Wilson MS campus buildings to the west, with single-family homes located west of the campus fronting Adams Street, and Verdugo Road to the east. The Wilson MS campus is rectangularly shaped and bordered by Glenoaks Boulevard to the north, Monterey Road to the south, Verdugo Road to the east, and Adams Street to the west.

**PROJECT DESCRIPTION:** The proposed project would result in the redevelopment of the existing grass field and paved basketball courts with a joint use multi-purpose field with football, soccer and lacrosse markings and surrounding rubberized surface jogging track, fitness equipment, perimeter security fence with privacy screening, restroom and storage/maintenance building(s), walkways, landscaping, irrigation, re-grading of the existing basketball court surface, and sports field lighting. The proposed project would make use of existing street and on-site parking. No change in site access or parking would occur. The proposed field lighting is necessary for evening use on both weeknights and weekends. The City's use of the proposed field would be from 5:00 p.m. to 10:00 p.m. Monday through Friday, and 8:00 a.m. to 10:00 p.m. on Saturday and Sunday. The City would have a Community Services & Parks Department employee on site during permitted field times when the school is not in use. No permanent seating or bleachers are proposed. The project site has a general plan designation of Public/Semi Public and is zoned as R1 – Low Density Residential. No change in general plan or zoning designation is required for the proposed project.

The proposed project would not introduce new uses to the project site; rather, the proposed project would allow for the extended use of the project site by outside sporting groups during nighttime hours. Specifically, operation of field lighting would allow these groups to utilize the field until 10:00 p.m., in accordance with the 1999 Joint Use Agreement. Use of the proposed field lighting by outside groups would require a Facilities Use Permit issued by GUSD or the City of Glendale, similar to existing conditions that would establish the allowable hours of use.

**POTENTIAL ENVIRONMENTAL EFFECTS:** An EIR will be prepared to evaluate the project's potential impacts on the environment and analyze alternatives. The topics anticipated to be discussed in the EIR include aesthetics, air quality, greenhouse gas emissions, noise, and transportation/traffic. The project's potential environmental effects are further described in the project's Initial Study, which is available for review as detailed below.

**DOCUMENT AVAILABILITY:** The Initial Study is available for public review at the following locations (physical locations during normal business hours):

- City of Glendale Community Services & Parks Department, 613 East Broadway Rm.120, Glendale, CA 91206
- Wilson Middle School, 1221 Monterey Road, Glendale, CA 91206
- City of Glendale Community Services & Parks website: <http://www.glendaleca.gov/parks>

If you require additional information, please contact Peter Vierheilg at (818) 548-2000.

Այս փաստաթղթի հայերեն տարբերակը կարող եք գտնել այցելելով [www.glendaleca.gov/parks](http://www.glendaleca.gov/parks) վեբ-կայքը և սեղմելով Wilson Middle School Multi-purpose Field հղումը:

Para ver este documento en español, por favor visite [www.glendaleca.gov/parks](http://www.glendaleca.gov/parks) y haga clic en el enlace Wilson Middle School Multi-purpose Field.

August 2017 | Initial Study

# WILSON MIDDLE SCHOOL MULTI-PURPOSE FIELD PROJECT

Glendale Community Services & Parks

*Prepared for:*

**City of Glendale**

Contact: Peter Vierheilig, Project Manager  
613 East Broadway, Room 120  
Glendale, California 91206  
818.548.2000

*Prepared by:*

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# Abbreviations and Acronyms

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AAQS	ambient air quality standards
AB	Assembly Bill
AQMP	air quality management plan
BMP	best management practices
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
cfs	cubic feet per second
CGS	California Geologic Survey
CMP	congestion management program
CNDDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CO	carbon monoxide
CO <sub>2e</sub>	carbon dioxide equivalent
Corps	US Army Corps of Engineers
CSO	combined sewer overflows
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dBA	A-weighted decibel
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
EIR	environmental impact report
EPA	United States Environmental Protection Agency
FEMA	Federal Emergency Management Agency
GHG	greenhouse gases
LOS	level of service

## Abbreviations and Acronyms

LST	localized significance thresholds
NAHC	Native American Heritage Commission
NO <sub>x</sub>	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
O <sub>3</sub>	ozone
RCRA	Resource Conservation and Recovery Act
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SoCAB	South Coast Air Basin
SO <sub>x</sub>	sulfur oxides
SUSMP	standard urban stormwater mitigation plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
UWMP	urban water management plan
VT	vehicle miles traveled
VOC	volatile organic compound
WQMP	water quality management plan



# 1. Introduction

---

The City of Glendale Community Services and Parks Department (City of Glendale) has partnered with the Glendale Unified School District (GUSD) to develop a multi-purpose field with sports field lighting on the campus of Wilson Middle School (Wilson MS), at 1221 Monterey Road in the northeast part of Glendale. The City of Glendale will serve as the Lead Agency for the proposed project in accordance with the California Environmental Quality Act (CEQA), Section 15051(c). This Initial Study is a preliminary evaluation of the potential environmental consequences associated with the proposed project. As part of the City's approval process, the proposed project is required to undergo an environmental review pursuant to CEQA. The lead agency uses the initial study analysis to determine whether an environmental impact report (EIR) or a negative declaration (ND) is required. If the initial study concludes that the project may have a significant effect on the environment, an EIR must be prepared. Otherwise, a ND or mitigated negative declaration (MND) is prepared.

## 1.1 PROJECT LOCATION

Wilson MS is located at 1221 Monterey Road in the northeast part of the City of Glendale, Los Angeles County, California (Figure 1, *Regional Location*). The Wilson MS Multi-Purpose Field Project (proposed project) would disturb approximately 3.85 acres – consisting of the existing athletic field and basketball courts – along the northern portion of the Wilson MS campus. The proposed project would not impact other areas of the campus. The 3.85 acres will be referred to as the “project site.” The project site is bounded by multifamily residential uses to the north (fronting East Glenoaks Boulevard), Wilson MS campus buildings, including classrooms and administrative buildings (fronting Monterey Road) to the south, Wilson MS campus buildings to the west, with single-family and multi-family residential uses located west of the campus fronting Adams Street, and Verdugo Road to the east. The City of Glendale is surrounded by the cities of La Canada Flintridge to the north, Pasadena to the east, Burbank to the west and Los Angeles to the south. Regional access to the Wilson MS campus is State Route 134 (SR-134), approximately 0.13 miles to the south. The Wilson MS campus is rectangularly shaped and bordered by Glenoaks Boulevard to the north, Monterey Road to the south, Verdugo Road to the east, and Adams Street to west (Figure 2, *Local Vicinity*).

## 1.2 ENVIRONMENTAL SETTING

### 1.2.1 Existing Land Use

Wilson MS campus is approximately 10 acres in size and is currently developed with classroom buildings, administration building, a gymnasium, a multi-purpose athletic field, ten outdoor basketball courts, an outdoor lunch area, cafeteria, staff/visitor parking lot, student drop-off/pick-up zone, pedestrian walkways and landscaped planters (see Figure 3, *Aerial Photograph*). School enrollment for the 2016-17 school year included 1,183 students attending 6<sup>th</sup> through 8<sup>th</sup> grade. The typical bell schedule begins the school day at 8:00 a.m. and dismissal occurs at 2:47 p.m.

## 1. Introduction

The existing athletic field is located on the northernmost portion of the campus, to the north of the existing basketball courts. The athletic field is a 2.75-acres and comprised of natural turf, with a long jump pit located along the eastern border. The basketball courts are approximately 0.92 acres and include six of the ten courts on the campus (the remaining four are to the south and separated from the project site by an existing fence and are not a part of the proposed project). The field does not have bleachers or lights. The project site is approximately 6 feet below the grade of Verdugo Road, and 5 feet below the grade of the unnamed alley between the site and the multi-family homes to the north. A small storage box is located along the eastern border. The field and the adjacent basketball courts are relatively level, with a minor slope towards the center for site drainage.

The project site is currently utilized by Wilson MS for physical education purposes and school sports programs. In addition to Wilson MS uses, outside sporting groups have been individually permitted by Glendale Unified School District (GUSD) to use the practice field on weekends generally between the hours of 8:30 AM and 6:00 p.m. on Saturdays and 8:00 a.m. and 6:00 p.m. on Sundays.

### **Parking and Access**

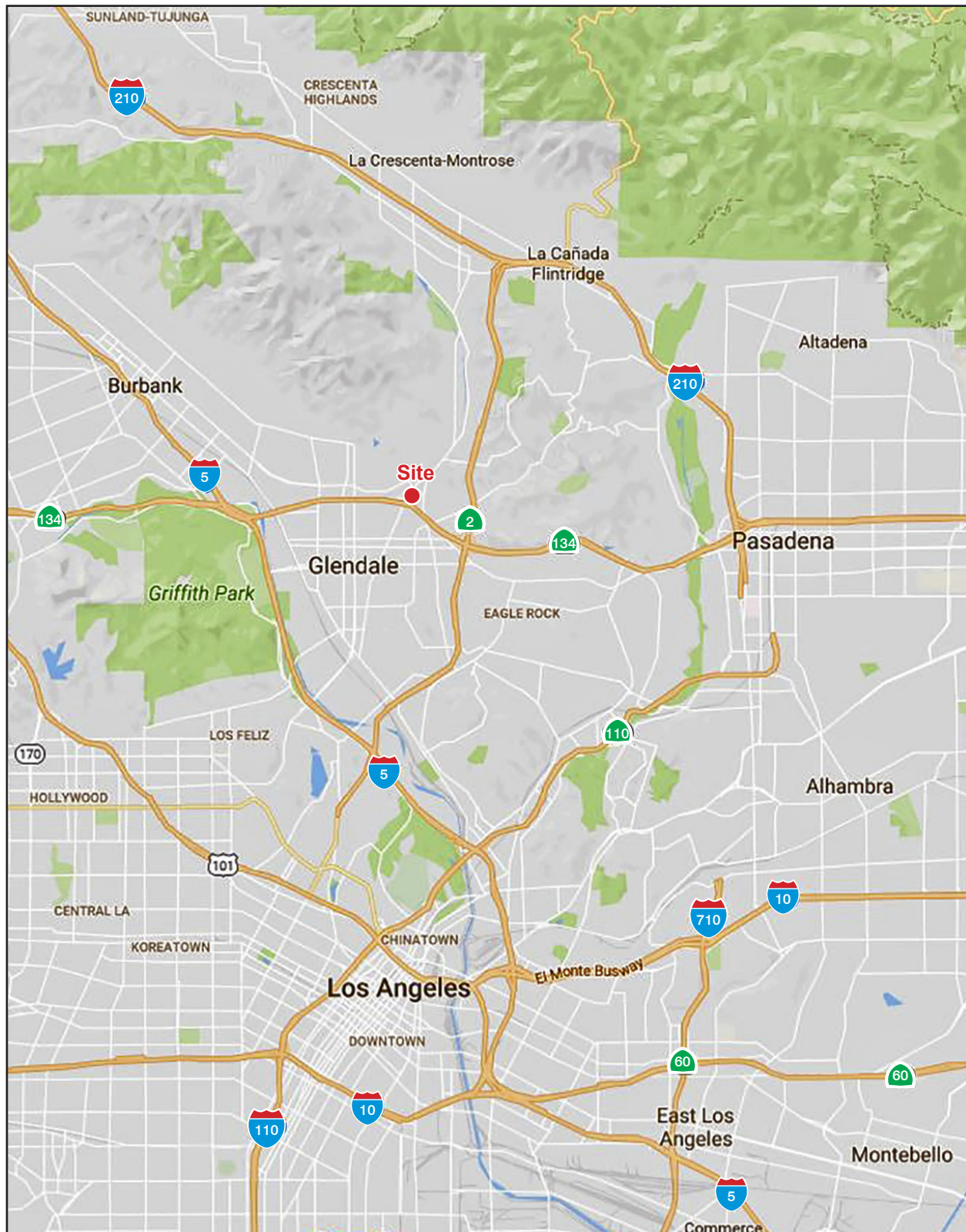
Main vehicular access to the Wilson MS campus is provided along Monterey Road, including the student drop-off/pick-up zone and faculty/visitor parking located along Monterey Road. Limited parking is provided along the western perimeter of the campus, adjacent the classroom buildings located west of the project site. Street parking is available on Verdugo Road, Monterey Road and Adams Street.

### **1.2.2 Surrounding Land Use**

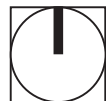
The project site is surrounded by academic facilities on the Wilson MS campus and a mix of single- and multi-family residential uses. Directly to the north of the project are multi-family residential uses beyond the alley. To the east across Verdugo Road are single-family and multi-family residences. To the south are the main buildings of Wilson MS campus, the faculty and staff parking lot, and multi-family residential uses across Monterey Road. To the west, immediately adjacent the project site, are Wilson MS campus buildings and single-family and multi-family residential uses fronting Adams Street.

Figure 1 - Regional Location

1. Introduction



0 2  
Scale (Miles)



Source: Google Maps, 2017

August 2017

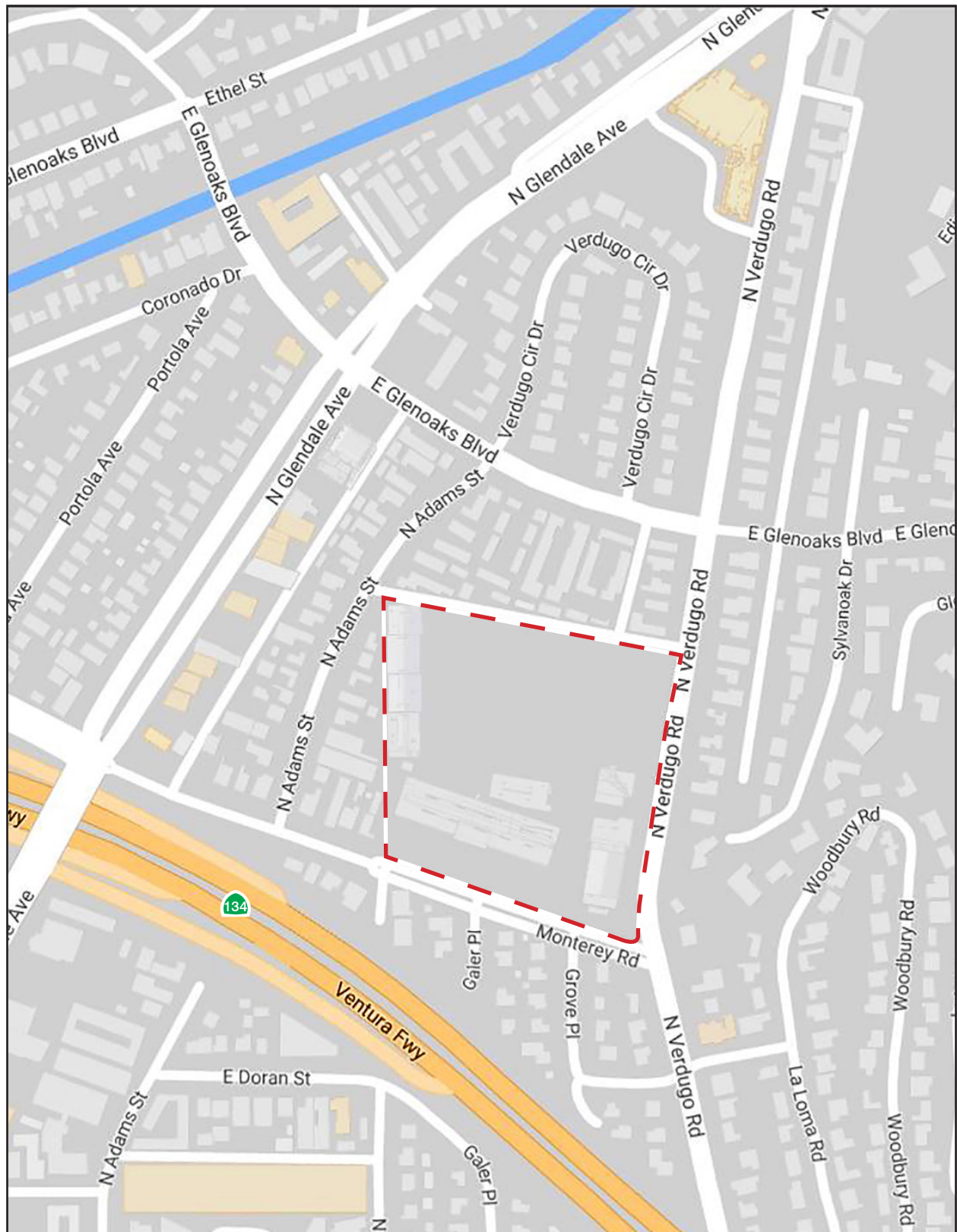
PlaceWorks • GLN-02.0

## 1. Introduction

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Figure 2 - Local Vicinity

1. Introduction



--- Project Site

0 300  
Scale (Feet)



Source: Google Maps, 2017

August 2017

PlaceWorks • GLN-02.0

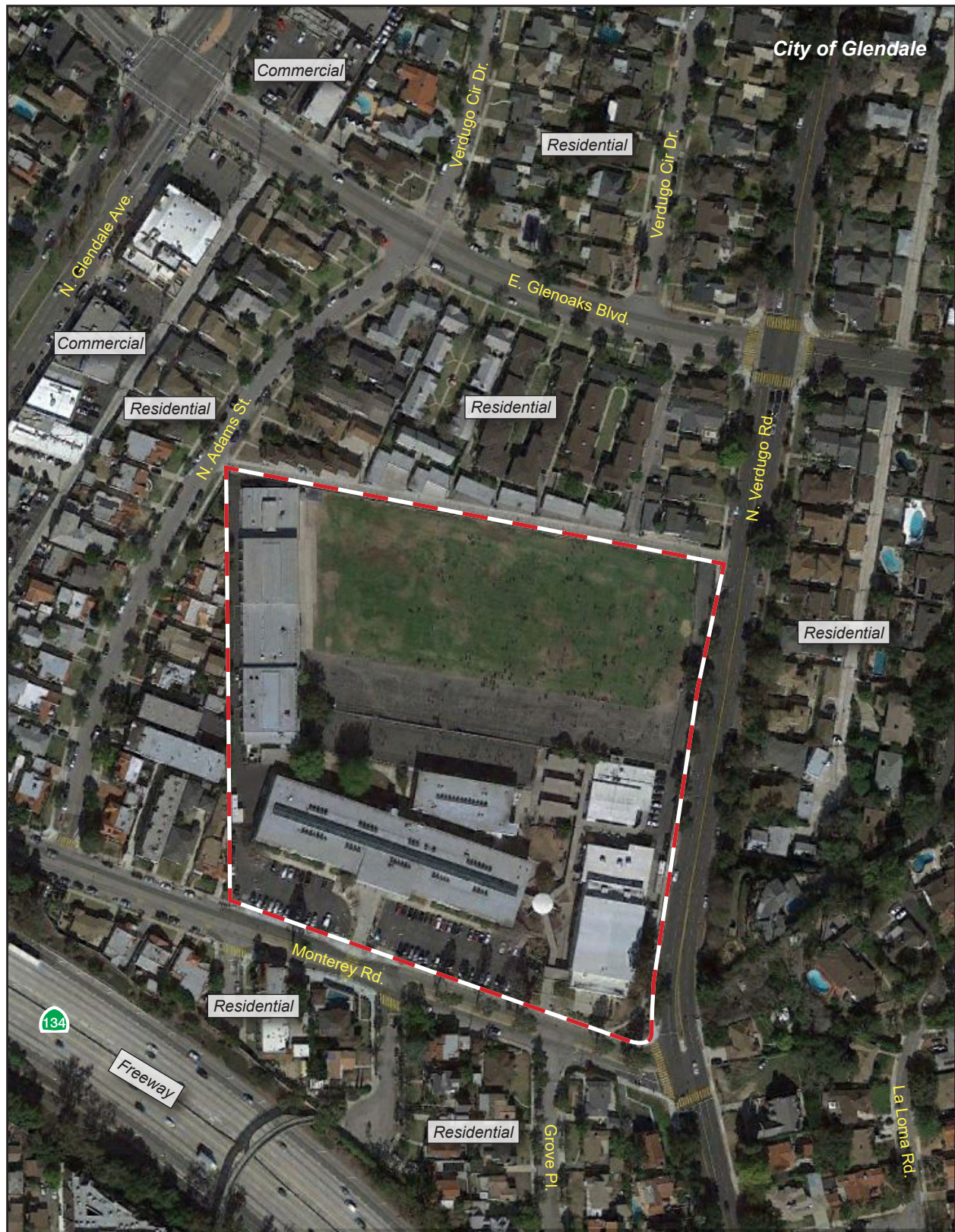
## 1. Introduction

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Figure 3 - Aerial Photograph

1. Introduction



— Project Site

0 300  
Scale (Feet)



Source: Google Maps, 2017

August 2017

PlaceWorks • GLN-02.0

## 1. Introduction

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## 1. Introduction

### 1.3 PROJECT DESCRIPTION

#### 1.3.1 Proposed Land Use

The proposed project would result in the redevelopment of the existing grass field and paved basketball courts with a joint use multi-purpose field with football, soccer, and lacrosse markings and surrounding rubberized surface jogging track, fitness equipment, perimeter security fence with privacy screening, restroom and storage/maintenance building(s), walkways, landscaping, irrigation, re-grading of the existing basketball court surface, and sports field lighting. The proposed project would make use of existing street and on-site parking. No change in site access or parking would occur. The proposed field lighting is necessary for evening use on both weeknights and weekends. The City's use of the proposed field would be from 5:00 p.m. to 10:00 p.m. Monday through Friday, and 8:00 a.m. to 10:00 p.m. on Saturday and Sunday. The City would have a Community Services & Parks Department employee on site during permitted field times when the school is not in use. No permanent seating or bleachers are proposed.

The proposed project involves the installation and operation of four to six 60-foot-tall light poles along the perimeter of the running track and installation of a synthetic all-weather sports field and five-lane all-weather running track. Figure 4, *Project Site Plan* illustrates the location of the proposed field lighting fixtures on the project site. Each light pole would be mounted with seven light fixtures utilizing 1,500 watt (1.56 kilowatts per hour [kW/h]) Musco TLC-LED-1150 lamps and equipped with Light-Structure Green (LSG) visors. The new light poles would provide an average of 30 foot-candles across the athletic field, which is the lighting standard for recreational activity. The lighting would also be designed to reduce illumination levels to zero at the site perimeter. The design of the proposed field lighting was selected in order to minimize spill light onto adjacent uses.

The proposed project would not introduce new uses to the project site; rather, the proposed project would allow for the extended use of the project site by outside sporting groups during nighttime hours. Specifically, operation of field lighting would allow these groups to utilize the field until 10:00 p.m., in accordance with the 1999 Joint Use Agreement. Use of the proposed field lighting by outside groups would require a Facilities Use Permit issued by GUSD or the City of Glendale, similar to existing conditions that would establish the allowable hours of use.

#### 1.3.2 Project Phasing

Construction activities are anticipated to begin in Summer 2018. The construction would be completed in one stage, last approximately three months, and include the following activities: grading and excavation of the existing field, trenching for site utilities and irrigation; synthetic turf installation; and light pole installation. Grading activities would result in the disturbance of approximately 121,771 square feet of area, and would result in the export of approximately 13,381 cubic yards of soil.

## 1. Introduction

### 1.4 EXISTING ZONING AND GENERAL PLAN

The project site has a general plan designation of Public/Semi Public and is zoned as R1 – Low Density Residential.

### 1.5 OTHER AGENCY ACTION REQUESTED

#### REGIONAL AGENCIES

- Los Angeles Regional Water Quality Control Board (NPDES permit; construction storm water run-off permits)
- South Coast Air Quality Management District – Rule 201: Permit to construct

#### LOCAL AGENCIES

- City of Glendale Public Works/Engineering (for grading permit)
- Storm Drain MS4 Permit

Figure 4 - Site Plan

1. Introduction



— Project Site

⊗ Lighting Locations (6)

0 125

Scale (Feet)



Source: Google Earth Pro, 2017

August 2017

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## 1. Introduction

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## 2. Environmental Checklist

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### 2.1 BACKGROUND

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1. **Project Title:** Wilson Middle School Multi-Purpose Field Project

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2. **Lead Agency Name and Address:**  
The City of Glendale  
Community Services and Parks Department  
613 East Broadway, Room 120  
Glendale, California 91206

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3. **Contact Person and Phone Number:**  
Peter Vierheilig, Project Manager  
818.548.2000

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4. **Project Location:** 1221 Monterey Road in the northeast part of Glendale, approximately 0.13 miles to the northeast of the intersection of North Glendale Avenue and SR-134. The Wilson MS campus is rectangularly shaped and bordered by Glenoaks Boulevard to the north, Monterey Road to the south, Verdugo Road to the east, and Adams Street to west.

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5. **Project Sponsor's Name and Address:**  
The City of Glendale  
Community Services and Parks Department  
613 East Broadway, Room 120  
Glendale, California 91206

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6. **General Plan Designation:** Public/Semi Public

---

7. **Zoning:** R1 – Low Density Residential

---

8. **Description of Project:**  
The City of Glendale Community Services and Parks Department (City of Glendale) has partnered with the Glendale Unified School District (GUSD) to develop a multi-purpose field with sports field lighting on the campus of Wilson Middle School (Wilson MS), at 1221 Monterey Road in the northeast part of Glendale. The proposed project would result in the redevelopment of the existing grass field and paved basketball courts with a joint use multi-purpose field with soccer and lacrosse markings and surrounding rubberized surface jogging track, fitness equipment, perimeter security fence with privacy screening, seating, restroom and storage/maintenance building(s), walkways, landscaping, irrigation, re-grading of the existing basketball court surface, and sports field lighting.

## 2. Environmental Checklist

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### 9. Surrounding Land Uses and Setting:

The project site is surrounded by Wilson MS buildings and medium- and low-density residential, with community commercial to the west across Adams Street. Directly to the north of the project are multi-family residential uses beyond the alley. To the east across Verdugo Road are single-family and multi-family residences. To the south are the main buildings of Wilson MS campus, the faculty and staff parking lot, and multi-family residential uses across Monterey Road. To the west, immediately adjacent the project site, are Wilson MS campus buildings and single-family and multi-family residential uses fronting Adams Street.

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### 10. Other Public Agencies Whose Approval Is Required:

- Los Angeles Regional Water Quality Control Board (NPDES permit; construction storm water run-off permits)
- South Coast Air Quality Management District – Rule 201: Permit to construct

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### 11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.94 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

The Soboba Band of Luiseno Indians and the Fernandeno Tataviam Band of Mission Indians are on the City of Glendale's notification list pursuant to AB 52. The City will notify those tribes and will consult with both tribes requesting consultation.



## 2. Environmental Checklist

### 2.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

### 2.3 DETERMINATION (TO BE COMPLETED BY THE LEAD AGENCY)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

  
Signature

Peter Vierheilig  
Printed Name

August 1, 2017

Date

  
For

## 2. Environmental Checklist

### 2.4 EVALUATION OF ENVIRONMENTAL IMPACTS

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



## 2. Environmental Checklist

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
- a) the significance criteria or threshold, if any, used to evaluate each question; and
  - b) the mitigation measure identified, if any, to reduce the impact to less than significant.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>I. AESTHETICS. Would the project:</b>				
a) Have a substantial adverse effect on a scenic vista?			<b>X</b>	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				<b>X</b>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			<b>X</b>	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<b>X</b>			
<b>II. AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:</b>				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				<b>X</b>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				<b>X</b>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?				<b>X</b>
d) Result in the loss of forest land or conversion of forest land to non-forest use?				<b>X</b>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				<b>X</b>

## 2. Environmental Checklist

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:</b>				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<b>X</b>			
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<b>X</b>			
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<b>X</b>			
d) Expose sensitive receptors to substantial pollutant concentrations?	<b>X</b>			
e) Create objectionable odors affecting a substantial number of people?			<b>X</b>	
<b>IV. BIOLOGICAL RESOURCES. Would the project:</b>				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				<b>X</b>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				<b>X</b>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				<b>X</b>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				<b>X</b>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				<b>X</b>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				<b>X</b>
<b>V. CULTURAL RESOURCES. Would the project:</b>				
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?				<b>X</b>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?			<b>X</b>	
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			<b>X</b>	

## 2. Environmental Checklist

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Disturb any human remains, including those interred outside of dedicated cemeteries?			<b>X</b>	
<b>VI. GEOLOGY AND SOILS. Would the project:</b>				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				<b>X</b>
ii) Strong seismic ground shaking?			<b>X</b>	
iii) Seismic-related ground failure, including liquefaction?			<b>X</b>	
iv) Landslides?				<b>X</b>
b) Result in substantial soil erosion or the loss of topsoil?			<b>X</b>	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			<b>X</b>	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			<b>X</b>	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				<b>X</b>
<b>VII. GREENHOUSE GAS EMISSIONS. Would the project:</b>				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<b>X</b>			
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<b>X</b>			
<b>VIII. HAZARDS AND HAZARDOUS MATERIALS. Would the project:</b>				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			<b>X</b>	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			<b>X</b>	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			<b>X</b>	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				<b>X</b>

## 2. Environmental Checklist

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				<b>X</b>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				<b>X</b>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				<b>X</b>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				<b>X</b>
<b>IX. HYDROLOGY AND WATER QUALITY. Would the project:</b>				
a) Violate any water quality standards or waste discharge requirements?			<b>X</b>	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			<b>X</b>	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in a substantial erosion or siltation on- or off-site			<b>X</b>	
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			<b>X</b>	
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?			<b>X</b>	
f) Otherwise substantially degrade water quality?			<b>X</b>	
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				<b>X</b>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				<b>X</b>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				<b>X</b>
j) Inundation by seiche, tsunami, or mudflow?				<b>X</b>
<b>X. LAND USE AND PLANNING. Would the project:</b>				
a) Physically divide an established community?				<b>X</b>

## 2. Environmental Checklist

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				<b>X</b>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				<b>X</b>
<b>XI. MINERAL RESOURCES. Would the project:</b>				
a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?				<b>X</b>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				<b>X</b>
<b>XII. NOISE. Would the project result in:</b>				
a) 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?	<b>X</b>			
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<b>X</b>			
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<b>X</b>			
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<b>X</b>			
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				<b>X</b>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				<b>X</b>
<b>XIII. POPULATION AND HOUSING. Would the project:</b>				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				<b>X</b>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				<b>X</b>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				<b>X</b>

## 2. Environmental Checklist

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XIV. PUBLIC SERVICES.</b> Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?			<b>X</b>	
b) Police protection?			<b>X</b>	
c) Schools?				<b>X</b>
d) Parks?				<b>X</b>
e) Other public facilities?				<b>X</b>
<b>XV. RECREATION.</b>				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				<b>X</b>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				<b>X</b>
<b>XVI. TRANSPORTATION/TRAFFIC.</b> Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<b>X</b>			
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<b>X</b>			
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				<b>X</b>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				<b>X</b>
e) Result in inadequate emergency access?	<b>X</b>			
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<b>X</b>			
g) Result in inadequate parking capacity? (optional)	<b>X</b>			

## 2. Environmental Checklist

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XVII. TRIBAL CULTURAL RESOURCES.</b> Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or			X	
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.			X	
<b>XVIII. UTILITIES AND SERVICE SYSTEMS.</b> Would the project:				
a) Exceed waste water treatment requirements of the applicable Regional Water Quality Control Board?			X	
b) Require or result in the construction of new water or waste water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
d) Have sufficient water supplies available to serve the project from existing entitlements and resources or are new or expanded entitlements needed?			X	
e) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g) Comply with federal, state, and local statutes and regulations related to solid waste?			X	
<b>XIX. MANDATORY FINDINGS OF SIGNIFICANCE.</b>				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X	

## 2. Environmental Checklist

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<b>X</b>			
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<b>X</b>			



## 3. Environmental Analysis

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Section 2.4 provided a checklist of environmental impacts. This section provides an evaluation of the impact categories and questions contained in the checklist and identifies mitigation measures, if applicable.

### 3.1 AESTHETICS

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

**Less Than Significant Impact.** The project site is fully developed and consists of a middle school campus. The project's surrounding vicinity is urban and is fully developed with residential and commercial uses. The project site does not contain unique visual features that would distinguish it from surrounding areas nor is it located within a designated scenic vista. The nearest scenic areas in the vicinity are the Verdugo Mountains Open Space Preserve, approximately 1.5 miles to the north, and the San Rafael Hills, approximately 1.2 miles to the east. Views from the project site and these scenic areas are limited and obstructed by the surrounding urban environment. Although project elements would be visible from the surrounding neighborhood, implementation of the proposed project would not result in the obstruction or degradation of existing scenic views, and views would continue to be available beyond the project site.

While the project would construct field lighting and a restroom facility, the project is not considered an impediment to scenic vistas as no formal scenic vistas are identified in the Glendale General Plan Open Space and Conservation Element (Glendale 2017). As such, the project would have a less than significant impact on scenic vistas.

#### b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

**No Impact.** The project would be located on a developed middle school campus. No state scenic highways, scenic resources, or historic buildings exist on the site or within the project vicinity. Therefore, the project would have no impact on scenic resources within a state scenic highway. As such, no impact would occur to scenic resources.

#### c) Substantially degrade the existing visual character or quality of the site and its surroundings?

**Less than Significant Impact.** The project site is a developed middle school campus, with all construction taking place on the existing athletic field at the north end of the campus. The field currently does not have field lighting facilities or a track. The proposed lighting design will limit light overflow to adjacent properties, as discussed in section d) below. Changing the existing grass field to a synthetic turf field would not change the visual character of the site or the surrounding areas, as it would continue to be used as it is presently. Implementation of the proposed lighting facilities, synthetic turf field, and, surrounding rubberized jogging

### 3. Environmental Analysis

track would not detract from the visual character of the site, as these improvements would be visually consistent with the uses currently existing on the project site.

Grading and construction activities associated with the proposed project have the potential to cause temporary degradation of local aesthetics for residents living close to the school site and for Wilson MS staff and students. However, such activities are temporary and would cease with completion of the field renovations. In addition, the construction activities would not alter the character of the surrounding neighborhood as the project would occur on the school site and not within the surrounding neighborhoods. Upon completion of construction activities, the school's athletic field would return to a use for which it was originally intended. Due to the short-term, temporary nature of construction activities and the non-altering effect on the surrounding neighborhood character, impacts would be less than significant.

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

**Potentially Significant Impact.** Under current conditions, no nighttime lighting is installed at the existing athletic fields, and therefore, all programmed activity on the sports fields ceases at dusk. The athletic fields are surrounded by the Wilson MS campus to the west and south, North Verdugo Road to the east, and residential uses to the north. The athletic fields are separated from the residential uses by an approximately 55-foot wide setback.

The proposed project would result in the redevelopment of the existing grass field and paved playground with a multi-purpose synthetic turf field with soccer and lacrosse markings and surrounding rubberized surface jogging track, fitness equipment, perimeter security fence with privacy screening, restroom and storage/maintenance building(s), walkways, landscaping, irrigation, re-grading of the existing basketball court surface, and sports field lighting. Four to six field lights would be provided for evening practices, with each light pole being approximately 60 feet in height and producing an estimated 30 foot-candles on the field. Lighting would not be used past 10:00 p.m.

A photometric plan will be prepared to identify the location of all proposed lighting on-site and measure the light intensity within the interior of the project site and at the project boundaries. The photometric plan is intended to demonstrate that lighting levels at the project boundaries will meet established lighting thresholds and will not result in light spillover onto adjacent properties, including the adjacent residential uses. The methodology and findings of the photometric study will be discussed in detail in the EIR. As described above, with the addition of nighttime lighting, the project as proposed would have the potential to result in significant impacts relative to lighting and glare impacts. Therefore, impacts are considered potentially significant, and this issue will be further evaluated in the EIR.

### 3.2 AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects,

### 3. Environmental Analysis

lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

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

**No Impact.** The California Department of Conservation manages the Farmland Mapping and Monitoring Program (FMMP), which identifies and maps significant farmland. Farmland is classified using a system of five categories including Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land. The classification of farmland as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance is based on the suitability of soils for agricultural production, as determined by a soil survey conducted by the Natural Resources Conservation Service (NRCS). The California Department of Conservation manages an interactive website, the California Important Farmland Finder. This website program identifies the project site as being outside of the survey area and is therefore not considered to be agriculturally important land (CIFF 2014).

The project site is fully developed with existing educational uses and no farmland exists within the area. The project would be located on a developed middle school campus. This site is not subject to a Williamson Act contract, and the site is zoned as Public Semi-Public in the City of Glendale Zoning Ordinance. This zoning district was not intended for agricultural uses. The project site contains no forest or timber resources, and is not zoned for forestland protection or timber production. The entirety of the project would occur on the existing athletic field portion of the school campus. The project site is not located adjacent to or within the vicinity of any farmland. Therefore, the project would result in no impact to agricultural or forest resources.

### 3.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

### 3. Environmental Analysis

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

**Potentially Significant Impact.** The project site is located in the South Coast Air Basin (SoCAB), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAQMD is the air pollution control agency primarily responsible for preparing the Basin Air Quality Management Plan (AQMP), which is a comprehensive air pollution control program for making progress towards and attaining the established state and federal ambient air quality standards. The most recent 2016 AQMP was adopted by the governing board of the SCAQMD on March 3, 2017. The 2016 AQMP is a regional and multi-agency effort including the SCAQMD, the California Air Resources Board (CARB), the Southern California Association of Governments (SCAG), and the US Environmental Protection Agency (EPA). The plan's pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SCAG's 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans. The project is subject to the SCAQMD's Air Quality Management Plan.

Criteria for determining consistency with the AQMP are defined by the following indicators:

- *Consistency Criterion No. 1:* The proposed project would not result in an increase in the frequency or severity of existing air quality violations, or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.
- *Consistency Criterion No. 2:* The proposed project would not exceed the assumptions in the AQMP based on the years of project buildout phase.

The violations to which Consistency Criterion No. 1 refers are the California ambient air quality standards (CAAQS) and the national ambient air quality standards (NAAQS). As evaluated under Response 3.3.b) below, the project could exceed the short-term construction standards or long-term operational standards, and in so doing, could potentially violate air quality standards. Thus, potentially significant impacts could occur, and the project's consistency with the first criterion will be further analyzed in the EIR.

Concerning Consistency Criterion No. 2, the AQMP contains air pollutant reduction strategies and demonstrates that the applicable ambient air quality standards can be achieved within the time frames required under federal law. Growth projections from local general plans adopted by cities in the SCAQMD are provided to the Southern California Association of Governments (SCAG), which develops regional growth forecasts that are used to develop future air quality forecasts for the AQMP. Development consistent with the growth projections in the City of Glendale General Plan is considered to be consistent with the AQMP. The proposed project is consistent with the land use designation and development density presented in the General Plan. The proposed project would not result in an increase in population growth in the City of Glendale, nor would student attendance increase due to proposed athletic field improvements. Therefore, the project would not exceed the population or job growth projections used by the SCAQMD to develop the Air Quality Management Plan. Impacts would be less than significant.

### 3. Environmental Analysis

**b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?**

**Potentially Significant Impact.** Project construction and operations would generate emissions of criteria pollutants that could result in significant impacts to air quality in the area. Equipment usage and activities during construction of the project would result in emissions of fine particulate matter (PM<sub>2.5</sub>), coarse particulate matter (PM<sub>10</sub>), and ozone precursors, including oxides of nitrogen (NO<sub>x</sub>) and volatile organic compounds (VOC), among others, which could result in significant air quality impacts. Sources of emissions include construction (from heavy equipment used for grading, trenching, paving, and building construction, as well as on-road motor vehicles for equipment and material deliveries and workers commuting to the project site) and project operations (from vehicle trips and energy and area sources). Project contribution to regional emissions could result in a potentially significant impact. Further analysis of air quality impacts in the EIR is therefore warranted to determine whether short-term construction emissions and facility operations would significantly contribute to an existing or projected air quality violation of emission standards, requiring the consideration of mitigation measures. This impact is potentially significant and will be further evaluated in the EIR.

**c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?**

**Potentially Significant Impact.** The SoCAB is designated nonattainment for Ozone (O<sub>3</sub>) and fine particulate matter (PM<sub>2.5</sub>) under the California and National AAQS, nonattainment for particulate matter (PM<sub>10</sub>) under the California AAQS, and nonattainment for lead under the National AAQS. According to SCAQMD methodology, any project that does not exceed or can be mitigated to less than the daily threshold values would not add significantly to a cumulative impact. As discussed in Section 3.3.b, both short-term construction impacts and long-term operational impacts may exceed thresholds, so the project may result in a cumulatively considerable net increase in criteria pollutants. The EIR will evaluate the project's potential to result in a cumulatively considerable net increase in criteria pollutants. Identified mitigation measures will be incorporated as needed.

**d) Expose sensitive receptors to substantial pollutant concentrations?**

**Potentially Significant Impact** Sensitive populations are more susceptible to the effects of air pollution than is the general population. Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

The closest sensitive receptors include adjacent residential uses to the north and west of the site. The occupants of Wilson MS would also be considered sensitive receptors.

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Project construction activities in close proximity to these receptors would potentially expose residents, students, and staff to fugitive dust emissions. In order to avoid potential localized impacts, the project would be required to implement fugitive dust-control best management practices (BMPs) during construction activities. Construction activities would be short term in nature, and would cease upon completion; however, construction emissions from the proposed project will be evaluated to determine whether project construction emissions would be below SCAQMD thresholds. Additionally, standard mitigation measures for diesel equipment and dust control that are recommended by the SCAQMD will be evaluated as part of the EIR to avoid or reduce potential impacts to construction workers, students and staff, and surrounding residents.

Due to the nature of the proposed project (i.e. athletic fields), localized on-site operational emissions (i.e., area source emissions) are anticipated to be nominal and would not be expected to adversely affect nearby sensitive receptors; however, the project has the potential to generate air quality emissions that may expose sensitive receptors to substantial pollutant concentrations. The primary project operational emissions would occur from vehicles traveling to and from the facilities for practice and for organized events, with some emissions generated from use of equipment and vehicles for maintenance purposes.

An air quality assessment will be prepared, based upon the findings of the traffic impact analysis conducted for the proposed development. As impacts on air quality are considered to be potentially significant, this topic will be further analyzed in the EIR.

#### e) Create objectionable odors affecting a substantial number of people?

**Less Than Significant Impact.** Individual responses to odors are highly variable and can result in various effects, including psychological (i.e., irritation, anger, or anxiety) and physiological (i.e., circulatory and respiratory effects, nausea, vomiting, and headache). Generally, the impact of an odor results from a variety of interacting factors such as frequency, duration, offensiveness, location, and sensory perception.

Frequency is a measure of how often an individual is exposed to an odor in the ambient environment. The intensity refers to an individual's or group's perception of the odor strength or concentration. The duration of an odor refers to the elapsed time over which an odor is experienced. The offensiveness of the odor is the subjective rating of the pleasantness or unpleasantness of an odor. The location accounts for the type of area in which a potentially affected person lives, works, or visits; the type of activity they are engaged in; and the sensitivity of the impacted receptor.

CARB's (2005) Air Quality and Land Use Handbook identifies the sources of the most common odor complaints received by local air districts. Typical sources include facilities such as sewage treatment plants, landfills, recycling facilities, petroleum refineries, and livestock operations. The project does not contain any of the land uses identified as typically associated with emissions of objectionable odors. As such, project impacts would be less than significant.

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#### 3.4 BIOLOGICAL RESOURCES

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

**No Impact.** The project site is in the urbanized area of northern Glendale. The area is surrounded by residential units, with SR-134 beyond residences to the south, and light commercial beyond residences to the west. No parks or areas of open space exist adjacent to the project site. The nearest open space areas in the vicinity are the Verdugo Mountains Open Space Preserve, approximately 1.5 miles to the north, and the San Rafael Hills, approximately 1.2 miles to the east.

The proposed project would be on the existing Wilson MS campus that is developed and has been used for school-related activities for many years. Vegetation on the project site includes grass on the athletic fields and campus courtyard, and bushes and trees located adjacent to school buildings.

The school campus is in a completely built-out urban environment. The proposed project's improvements would occur on previously disturbed land. Existing vegetation at the campus consists primarily of landscaping trees and ornamental shrubs. As a result, no suitable habitat for sensitive mammals, reptile, or fish species exist on the project site. Additionally, no riparian habitat or other sensitive natural community exists on the project site, and no wetlands or other jurisdictional waters of the United States are located on the project site (FWS 2017). No surface water bodies or drainages occur on the project site. The site does not provide nursery sites for wildlife, nor is it conducive to function as a corridor for migratory wildlife. No streams or waterways are located on the project site. according to the City's General Open Space and Conservation Element, the project site is not located within a biological resource area, significant ecological area, or a natural community. There

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are no adopted habitat conservation plans, natural community conservation plans, or other approved local, regional, or state habitat conservation plans that govern the project site (Glendale 2017).

The installation of field lighting and synthetic turf on an existing athletic field, and installation of an all-weather track surface, would not disrupt biological resources, and no impact would occur.

### 3.5 CULTURAL RESOURCES

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

**No Impact.** Section 15064.5 defines historic resources as resources listed or determined to be eligible for listing by the State Historical Resources Commission, a local register of historical resources, or the lead agency. Generally a resource is considered “historically significant” if it meets one of the following criteria:

- i) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- ii) Is associated with the lives of persons important in our past;
- iii) Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual, or possesses high artistic values;
- iv) Has yielded, or may be likely to yield, information important in prehistory or history.

The project would involve the installation of athletic field light fixtures, replacement of the field grass with synthetic turf, and the addition of a track. The installation of the athletic field lights would occur within the footprint of the existing athletic field and not near any listed historic buildings or other historic resources located within the project site. Improvements to the athletic field would occur on the existing field and would not result in changes to the existing middle school buildings. No historic resources on the project site are listed in the City of Glendale General Plan, Historic Resources Element (Glendale 2017). Therefore, the proposed project would result in no impact to historic resources.

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

**Less Than Significant Impact.** The proposed project involves replacing the existing turf field with synthetic turf, and installing a track, and field lighting. The project site is located within an urbanized area within the city (i.e. not undeveloped, pristine land). As the property has been previously disturbed and currently supports similar sports field uses, it is not anticipated that unknown cultural resources are present on-site. In the unlikely event such resources are discovered during project grading and/or excavation activities, adherence to standard protocols pertaining to the discovery of unknown cultural resources would ensure that any discovery is properly managed. Project impacts to cultural resources are anticipated to be less than significant.



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

**Less Than Significant Impact.** No paleontological resources are known to exist within the project area. The project site has been previously graded and any surficial paleontological resources, which may have existed at one time, have likely been previously disturbed or destroyed and therefore, implementation of the proposed project is not likely to uncover any such resources. In the unlikely event such resources are discovered during project grading and/or excavation activities, adherence to standard protocols pertaining to the discovery of unknown cultural resources would ensure that any discovery is properly managed. Project impacts to paleontological resources are anticipated to be less than significant.

**d) Disturb any human remains, including those interred outside of dedicated cemeteries?**

**Less Than Significant Impact.** There are no cemeteries or known human burials at the site, and the subject property has been previously disturbed during construction of the sporting facilities present on the site; however, ground disturbance (i.e., grading and excavation) would have the potential to result in discovery of human remains (although the potential is considered to be very low). In this unlikely event, the District would be responsible for compliance with California Health and Safety Code Section 7050.5 and CEQA Guidelines Section 15064.5. California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the county coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b), remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Los Angeles County coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within a reasonable time frame. Subsequently, the Native American Heritage Commission shall identify the most likely descendant. The most likely descendant shall then make recommendations and engage in consultations concerning the treatment of the remains, as provided in Public Resources Code Section 5097.98. Impacts in this regard would be less than significant.

## 3.6 GEOLOGY AND SOILS

**a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:**

- i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

**No Impact.** The proposed project site is not listed within an Alquist-Priolo Earthquake Fault Zone (CGS 1999). No active faults are known to transect the site and, therefore, the site is not expected to be adversely affected by surface rupturing. No fault rupture is delineated by the Alquist-Priolo Earthquake Fault Zoning Map, and no hazard is anticipated at the proposed project site. Therefore, no impact would occur.

### 3. Environmental Analysis

#### ii) Strong seismic ground shaking?

**Less Than Significant Impact.** As with all development in Southern California, the proposed project site is located in a seismically active region and may be subject to the effects of ground shaking. Strong ground shaking occurs when energy is released during an earthquake and varies dependent on the distance between the site and the earthquake, the magnitude of the earthquake, and the geologic conditions underlying and surrounding the site. The project site could be expected to experience strong ground shaking from numerous local and regional faults. Structures for human occupancy must be designed to meet or exceed CBC standards for earthquake resistance. The CBC comprises California Code of Regulations Title 24 Part 2; is updated triennially; and the 2016 CBC took effect on January 1, 2017. The CBC contains provisions for earthquake safety based on factors including occupancy type, the types of soil and rock onsite, and the strength of ground motion with a specified probability at the site. Conformance with the seismic safety provisions of the most current requirements of the CBC would ensure adequate mitigation of the risks associated with faulting within, or proximate to, the project site. Impacts of the project would be less than significant.

#### iii) Seismic-related ground failure, including liquefaction?

**Less Than Significant Impact.** Liquefaction is a phenomenon in which cohesionless, saturated, finegrained sand and sandy silt soils lose shear strength and fail due to ground shaking. Liquefaction is defined as the transformation of granular material from a solid state into a liquefied state as a consequence of increased pore-water pressure. The project site is not located within an area prone to liquefaction as indicated in the City's Safety Element (August 2003). Therefore, no impacts associated with liquefaction would occur. Therefore, a less-than-significant impact would occur as a result of seismic-related ground failure, including liquefaction.

#### iv) Landslides?

**No Impact.** Significant landslides and erosion typically occur on steep slopes where stormwater and high winds can carry topsoil down hillsides. The project is located in a relatively level area, and there are no steep slopes where stormwater and high winds can carry topsoil down hillsides. Therefore, no impact would occur.

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

**Less than Impact.** The potential exists for soil erosion to occur during project construction when the turf grass is removed, exposing the underlying ground surface. The construction contractor would be required to implement standard dust control measures and construction site storm water runoff control measures. Conformance with such standards would reduce the potential for substantial soil erosion or the loss of topsoil from the site during the grading and construction phase. Once the synthetic turf is installed, all exposed soil materials would be covered, and there would be limited potential for erosion or siltation to occur. Impacts in this regard would be less than significant.

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

**Less Than Significant Impact.** Due to the flat topography of the proposed project site, the potential for lateral spreading is considered very low. Additionally, as indicated under Section 3.6.a)(iii), the soils on the proposed project site are not susceptible to liquefaction. The potential for lateral spreading, liquefaction, subsidence, and other types of ground failure or collapse was addressed under Section 3.6.a)(iii) and was determined to be a less than significant impact.

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

**Less Than Significant Impact.** Expansive or shrink-swell soils are soils that swell when subjected to moisture and shrink when dry. Expansive soils typically contain clay minerals that attract and absorb water, greatly increasing the volume of the soil. This increase in volume can cause damage to foundations, structures, and roadways. Conformance with the provisions of the most current requirements of the CBC would ensure adequate mitigation of the risks associated with expansive soils. Therefore, the potential impacts of expansive soils at the proposed project site would be less than significant.

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

**No Impact.** The proposed project would not produce wastewater that requires support of septic tanks or alternative wastewater disposal systems. Therefore, no impact would occur.

## 3.7 GREENHOUSE GAS EMISSIONS

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

**Potentially Significant Impact.** Climate change is not confined to a particular project area and is the consequence of global industrialization over the last 200 years. A typical project, even a very large one, does not generate enough GHG emissions on its own to significantly influence global climate change; hence, the issue of global climate change is, by definition, a cumulative environmental impact. The State of California, through its governor and legislature, has established a comprehensive framework for the substantial reduction of GHG emissions. This will occur primarily through the implementation of Assembly Bill 32 (AB 32), Senate Bill 375 (SB 375), and AB 197, which will address GHG emissions on a statewide, cumulative basis.

Construction and operation of the proposed residential project would have the potential to generate GHG emissions that could significantly impact the environment. The EIR will evaluate the potential for the project to generate a substantial increase in GHG emissions, and identified mitigation measures will be incorporated as needed.

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

**Potentially Significant Impact.** The City of Glendale has adopted the Greener Glendale Plan for the purpose of reducing GHG emissions. The SCAQMD, Glendale's regional air quality district agency, has not set for the region significance thresholds related to GHG emissions, but a project found to contribute to a net decrease in GHG emissions and found to be consistent with the adopted implementation of the CARB AB 32 Scoping Plan is presumed to have less than significant GHG impacts. GHG emissions will be addressed and reviewed in the EIR to determine the significance of potential impacts.

### 3.8 HAZARDS AND HAZARDOUS MATERIALS

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

**Less Than Significant Impact.** Hazardous materials associated with the proposed project would consist mostly of construction related equipment and materials. Use and/or storage of hazardous materials at the project site are expected to be minimal and would not constitute a level that would be subject to regulation.

During the construction phase, hazardous materials in the form of solvents, glues, and other common construction materials containing toxic substances may be transported to the site, and construction waste that possibly contains hazardous materials could be transported off the site for purposes of disposal. Appropriate documentation for all hazardous waste that is transported off site in connection with activities at the Wilson MS campus would be provided as required to ensure compliance with the existing hazardous materials regulations.

Operation of the proposed project would not require the handling of hazardous materials or result in the production of large amounts of hazardous waste. During the construction phase, the proposed project may generate hazardous and/or toxic waste. Federal, state, and local regulations govern the disposal of wastes identified as hazardous which could be produced during demolition and construction. Any potential hazardous materials encountered during demolition or construction activities would be disposed of in compliance with all applicable regulations for the handling of such waste. Adherence to all applicable federal and state laws related to routine transport, use, or disposal of hazardous materials would reduce the likelihood and severity of accidents which might occur during disposal of site-generated hazardous wastes, transit of hazardous waste, and project-induced upset from hazardous materials to a level that is less than significant.

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

**Less Than Significant Impact.**

### CONSTRUCTION EFFECTS

The proposed project site does not appear on any regulatory agency database (GeoTracker 2017). Construction activities of the proposed project could result in the exposure of construction personnel and the public to

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unidentified hazardous substances in the soil. Exposure to unanticipated hazardous substances could also occur from previously unidentified soil contamination caused by migrating contaminants originating at nearby listed sites. Exposure to hazardous materials during construction activities could occur as a result of any of the following:

- Direct dermal contact with hazardous materials
- Incidental ingestion of hazardous materials (usually due to improper hygiene, when workers fail to wash their hands before eating, drinking, or smoking)
- Inhalation of airborne dust released from dried hazardous materials

Cal-OSHA regulates worker safety with respect to the use of hazardous materials, including requirements for safety training, availability of safety equipment, hazardous materials exposure warnings, and emergency action and fire prevention plan preparation. Cal-OSHA enforces the hazard communication program regulations, which include provisions for identifying and labeling hazardous materials, describing the hazards of chemicals, and documenting employee training programs.

Compliance with existing regulations would ensure that construction workers and the general public are not exposed to any unusual or excessive risks related to hazardous materials during construction activities. As such, impacts associated with the exposure of construction workers and the public to hazardous materials during construction activities for the proposed project would be less than significant.

#### **OPERATIONAL EFFECTS**

It is not anticipated that operation of the proposed project would create a significant hazard to the public or the environment through reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment. Hazardous materials that could be stored within the project site would consist of common chemicals. Development of the proposed project would include the use and storage of common hazardous materials such as paints, solvents, and cleaning products for maintenance of the restroom facilities. The properties and health effects of different chemicals are unique to each chemical and depend on the extent to which an individual is exposed. The extent and exposure of individuals to hazardous materials would be limited by the relatively small quantities of these materials that are expected to be stored and used on the project site. As common maintenance products and chemicals would be consumed by use and with adherence to warning labels and storage recommendations from the individual manufacturers, these hazardous materials would not pose any greater risk than at any other similar development. Therefore, the probability of a major hazardous materials incident would be remote for the proposed project. Minor incidents could occur, but the consequences of such accidents would likely not be severe due to the types and amount of common chemicals anticipated to be used at the site. Impacts would be less than significant.

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

**Less Than Significant Impact.** The proposed project site is the practice field on the existing Wilson MS campus. The next closest school to the project site is RD White Elementary School located 0.4 mile to the southwest. As discussed above under Responses 8.a) and 8.b), the use of hazardous materials and substances during the operation of the proposed project are generally minimal and in small quantities. Currently, hazardous materials are used at Wilson MS for maintenance and repair activities, landscaping, air conditioning, medical supplies, and science labs. Operation of the Wilson MS facility would continue as under existing conditions. All hazardous materials and substances at the proposed project site would be subject to federal, state, and local health and safety requirements (i.e. RCRA, California Hazardous Waste Control Law, and principles prescribed by the California Department of Health Services, Centers for Disease Control and Prevention, and National Institutes of Health) and the proposed project would be under the regulatory oversight agencies (e.g., Los Angeles County Environmental Health Division, Department of Toxic Substance Control (DTSC) and/or RWQCB. The proposed project would result in a less-than-significant impact with regard to the emission or handling of hazardous or acutely hazardous materials, substances, or wastes within 0.25 mile of an existing or proposed school (air quality emissions are discussed in Section 3, above).

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

**No Impact.** The Wilson MS campus does not appear on any regulatory agency database (GeoTracker 2017). Adherence to existing laws and regulations would ensure that the no impact associated with exposure to hazardous materials from the development of the proposed project would occur.

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

**No Impact.** The proposed project site is located approximately 7 miles southeast of the Bob Hope Airport, located at 2627 North Hollywood Way in the City of Burbank. According to the Bob Hope Airport Influence Area Map, the proposed project site is not located in an airport land use plan area (Los Angeles 2017). As a result, the proposed project would not result in safety hazards for people residing or working in the area, and no impact would occur.

- f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?**

**No Impact.** Refer to Response 8.e) above

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**g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

**No Impact.** The installation of a turf field and field lighting system would not interfere with an emergency response plan or an emergency evacuation plan and field lighting will in no way interfere with the City of Glendale emergency operations. Therefore, implementation of the proposed project would have no impact on emergency response or evacuation plans.

**h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?**

**No Impact.** The proposed project site and surrounding area are characterized by features typical of an urban landscape. No wildlands exist within the immediate vicinity of the proposed project site. Consequently, development of the proposed project would not result in the exposure of people or structures to hazards associated with wildland fires and no impact would occur.

## 3.9 HYDROLOGY AND WATER QUALITY

**a) Violate any water quality standards or waste discharge requirements?**

**Less Than Significant Impact.** Urban runoff (both dry and wet weather) discharges into storm drains and in most cases, flows directly to creeks, rivers, lakes, and the ocean. Polluted runoff can have harmful effects on drinking water, recreational water, and wildlife. Urban runoff pollution includes a wide array of environmental, chemical, and biological compounds from both point and nonpoint sources. In the urban environment, stormwater characteristics depend on site conditions (e.g., land use, impervious cover, pollution prevention, types and amounts of best management practices), rain events (duration, amount of rainfall, intensity, and time between events), soil type and particle sizes, multiple chemical conditions, the amount of vehicular traffic, and atmospheric deposition. Major pollutants typically found in runoff from urban areas include sediments, nutrients, oxygen-demanding substances, heavy metals, petroleum hydrocarbons, pathogens, and bacteria.

Urban runoff can be divided into two categories: dry and wet weather urban runoff.

- Dry weather urban runoff occurs when there is no precipitation-generated runoff. Typical sources include landscape irrigation runoff, driveway and sidewalk washing, noncommercial vehicle washing, groundwater seepage, fire flow, potable water line operations and maintenance discharges, and permitted or illegal non-stormwater discharges.
- Wet weather urban runoff refers collectively to nonpoint source discharges that result from precipitation events. Wet weather runoff includes stormwater runoff. Stormwater discharges are generated by runoff from land and impervious areas such as building rooftops and paved streets and parking lots.

In 1999, the State Water Resources Control Board (SWRCB) adopted Order No. 99-08-DWQ, National Pollution Discharge Elimination System (NPDES) General Construction Permit No. CAS000002, Waste

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Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit). This permit was subsequently amended to include smaller construction sites. The general construction permit requires that construction sites with 1 acre or greater of soil disturbance, or less than 1 acre, but part of a greater common plan of development, apply for coverage for discharges under the general construction permit by submitting a Notice of Intent (NOI) for coverage, developing a stormwater pollution prevention plan (SWPPP), and implementing best management practices (BMPs) to address construction site pollutants. The SWRCB is responsible for implementing the Clean Water Act and issues NPDES permits to cities and counties through the individual Regional Water Quality Control Boards.

Construction of the proposed project would be subject to local, state, and federal water quality regulations. This includes, but is not limited to, required adherence to the federal Clean Water Act (CWA), Los Angeles Regional Water Quality Control Board (RWQCB) regulations, NPDES requirements, the National Flood Insurance Act, California Department of Water Resources (DWR) requirements, the California Fish and Wildlife Code, the California Water Code, and other applicable regulatory requirements. Development of the proposed project would cause a significant impact to hydrology and water quality if associated construction activities or operations would result in the violation of any water quality or waste discharge standards.

Prior to construction, the City would be required to prepare a SWPPP and obtain a waste discharge identification number from the SWRCB. The SWPPP would include a series of specific measures that would be included in the construction process to address erosion, accidental spills, and the quality of stormwater runoff. Best management practices (BMPs) that must be implemented as part of a SWPPP can be grouped into two major categories: erosion and sediment control BMPs, and non-stormwater management and materials management BMPs. Erosion controls include practices to stabilize soil, to protect the soil in its existing location, and to prevent soil particles from migrating. Sediment controls are practices to collect soil particles after they have migrated but before the sediment leaves the site. Examples of sediment control BMPs are street sweeping, fiber rolls, silt fencing, gravel bags, sand bags, storm drain inlet protection, sediment traps, and stockpile management areas. Tracking controls prevent sediment from being tracked off site via vehicles leaving the site to the extent practicable. A stabilized construction entrance not only limits the access points to the construction site but also functions to partially remove sediment from vehicles prior to leaving the site.

Requirements for waste discharges to stormwater from operation of developed land uses within the coastal watersheds of Los Angeles and Ventura counties are set forth in the Municipal Stormwater Permit (MS4 Permit), Order No. R4-2012-0175, issued by the Los Angeles Regional Water Quality Control Board in 2012. The project would include preparation and implementation of a water quality management plan pursuant to the MS4 Permit, specifying BMPs to be used during project design and operation to minimize stormwater pollution. It is anticipated that project conformance with appropriate BMPs and compliance with applicable local, state, and federal water quality regulations, in combination with design standards implemented by the City, would reduce potential water quality impacts during construction and operation to less than significant. Refer also to Section 9.(c).



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- b) **Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?**

**Less Than Significant Impact.** The project site is currently developed land on the existing Wilson MS campus. The majority of the project would result in the installation of synthetic all-weather turf for the sports fields and track, thereby allowing stormwater to continue to infiltrate through the ground surface. Only a relatively limited portion of the site, the addition of a restroom/storage facility, would support impervious surfaces. The increase in impervious surfaces on-site with project implementation, as compared to existing conditions, is not anticipated to be substantial relative to groundwater recharge in the area.

The proposed project site is neither a designated groundwater recharge area, nor does the project site serve as a primary source of groundwater recharge. No water features (e.g., streams or creeks) that serve the purpose of groundwater recharge for the area are located in the project vicinity. Therefore, implementation of the proposed project would not substantially deplete groundwater supplies or interfere with groundwater recharge, and a less than significant impact would occur.

- c) **Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in a substantial erosion or siltation on- or off-site.**

**Less Than Significant Impact.** Refer to Response 9.a), above. As stated above, the contractor would be responsible for preparation and implementation of a SWPPP by using a qualified SWPPP practitioner as defined in the General Construction Permit. This includes maintenance of erosion and sediment control during the life of the project and submittal of the annual reports.

Implementation of the proposed project would not alter the existing drainage patterns as the proposed uses would occur on the existing athletic field and track and would not result in changes to the drainage for those facilities. The City's contractor will be required to prepare an SWPPP in order to comply with the RWQCB's General Construction Storm Water Permit. The SWPPP will identify BMPs to be implemented during construction activities at the proposed project site to minimize soil erosion and protect existing drainage systems. Compliance with existing regulations developed to minimize erosion and siltation would reduce this impact to a less than significant level. Project infrastructure would connect to existing off-site storm drain infrastructure, and no upgrades or expansion of such existing off-site facilities would occur with project implementation. The proposed on-site drainage system would slow stormwater runoff velocities, allow sediment to settle out of the water, and capture trash and debris collected in the system. Furthermore, standard BMPs designed to prevent erosion both during and after construction would be implemented. While the proposed project would alter the existing on-site drainage patterns, any such alterations would be designed to meet local, state, and federal water quality standards and to ensure that stormwater flows do not result in substantial erosion or siltation.

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The proposed project would not substantially alter the existing drainage pattern of the site, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site. Impacts would be less than significant.

- d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?**

**Less Than Significant Impact.** Refer to Response 9.c), above. The project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site. Impacts would be less than significant.

- e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?**

**Less Than Significant Impact.** Refer to Responses 9.b) and 9.c), above. Grading and drainage improvement plans will be prepared for the project, consistent with local, state, and federal water quality requirements. The project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. The City's existing stormwater infrastructure is adequate to accommodate stormwater runoff from the site, which would not increase in rate or amount as compared to existing conditions with project implementation. Impacts would be less than significant.

- f) Otherwise substantially degrade water quality?**

**Less Than Significant Impact.** As stated in Responses 9.a) and 9.e), above, compliance with existing laws and regulations would ensure that the proposed project would result in a less than significant impact with respect to water quality or drainage in the proposed project area.

- g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?**

**No Impact.** The proposed project area is within Federal Emergency Management Act (FEMA) Flood Zone Designation X (Zone X) (FEMA 2008). Zone X is an area of minimal flood hazard, usually depicted on Flood Insurance Rate Maps (FIRMs) as above the 500-year flood level. According to the City of Glendale General Plan Safety Element, the proposed project site is not located within the inundation zone of any levee or dam (Glendale 2017). The proposed project site is not within a 100-year flood hazard area or inundation zone. No housing is proposed with the project, and no impact would occur.

- h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?**

**No Impact.** Refer to Response 9.g), above.

### 3. Environmental Analysis

**i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?**

**No Impact.** Refer to Response 9.g), above. The project site is not located in a flood hazard area; therefore, the significant risk of loss, injury, or death involving flooding is minimal. According to the City of Glendale General Plan Safety Element, the proposed project site is not located within the inundation zone of any levee or dam (Glendale 2017).

The subject site is currently developed with similar use types (sporting fields) as those proposed with the project. As such, the proposed improvements would not substantially change on-site circumstances with regard to flooding or substantially increase the number of people potentially exposed to hazards caused by flooding events. If a flooding event occurred, occupants of the project site would follow existing evacuation procedures, as under present conditions, or other hazard mitigation plans in effect at the time to minimize or avoid potential risks to public safety. Therefore, the project would not expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam. No impact would occur.

**j) Inundation by seiche, tsunami, or mudflow?**

**No Impact.** A seiche is a surface wave created when a body of water is shaken, usually by earthquake activity. Seiches are of concern relative to water storage facilities because inundation from a seiche can occur if the wave overflows a containment wall, such as the wall of a reservoir, water storage tank, dam or other artificial body of water. Although there are no large water tanks in the area that could impact the proposed project site, there are dams in the region that could create flooding impacts. Thirteen dams in the greater Los Angeles area moved or cracked during the 1994 Northridge earthquake. However, none were severely damaged. This low damage level was due in part to completion of the retrofitting of dams and reservoirs pursuant to the 1972 State Dam Safety Act.

The project site is located approximately 17.5 miles to the northeast of the Pacific Ocean and is therefore not located in a tsunami inundation zone. Furthermore, the project site is an existing middle school surrounded by urban and built up land. Topography on the campus is generally flat. Lands immediately surrounding the site are also generally flat in nature with topography sloping upward to the east, and no hillsides that would be potentially subject to mudslide events are present in the immediate vicinity. Additionally, no large bodies of water such as lakes or reservoirs are located within a 5-mile radius of the site. Therefore, the project is not subject to inundation by tsunami, seiche, or mudflow, and no impacts would occur.

## 3.10 LAND USE AND PLANNING

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

**No Impact.** The proposed project would not divide an established residential community, as the proposed project would occur entirely on an existing school campus. It is anticipated that all proposed improvements would occur within the interior of the site, and that no off-site improvements (e.g. construction of new roadways) would be required. Therefore, no impact would occur.

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- b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?**

**No Impact.** The City of Glendale General Plan Land Use Element designates the project site as Public Semi-Public (Glendale 2017). The middle school campus is zoned as Low Density Residential (R1); however, government (state) owned facilities (i.e. public schools) override city zoning (Government Resources Code Sections 53094, 65402[a], 65403, and Public Resources Code Section 21151.2). No changes to the existing land use designation or zoning is required or proposed with the project. Additionally, the proposed project would result in a continuation of the existing use of the site (athletic fields), allow for the extended use of the project site by existing uses, and therefore would not conflict with the intended use of the property or with surrounding land uses. Therefore, the proposed project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project. No impact would occur.

- c) Conflict with any applicable habitat conservation plan or natural community conservation plan?**

**No Impact.** The project site is in an urbanized area where surrounding lands are largely built out. There is no adopted habitat conservation plan (HCP), natural community conservation plan (NCCP), or other approved local, regional, or state habitat conservation plan that governs the project site (CDFW 2017). Therefore, the proposed project would not conflict with any applicable habitat conservation plan or natural community conservation plan. No impact would occur.

### 3.11 MINERAL RESOURCES

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

**No Impact.** No mineral resource recovery sites of statewide or regional significance are located on or in the immediate vicinity of the project site according to the City of Glendale General Plan, Open Space and Conservation Element. The project site is identified as being in a Mineral Resource Zone (MRZ) 3, an area containing mineral deposits whose significance cannot be evaluated from available data (Glendale 2017). Urbanized areas in Glendale are precluded from resource development and the project site is currently developed as an athletic field within an existing middle school campus; therefore, implementation of the proposed project would not result in the loss of availability of a known mineral resource or resource recovery site. No mineral resource impact would occur.

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

**No Impact.** As discussed above in Response 11.a), no mineral resource recovery sites are identified on or in the immediate vicinity of the project site. There would be no loss of availability of mineral resources and no impact would occur.

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#### 3.12 NOISE

**a) 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?**

**Potentially Significant Impact.** The proposed project would not generate any additional student population that would generate noise. Noise sensitive receptors in the vicinity of the proposed project are the residential uses located immediately to the north and adjacent to the practice field, the residential uses located to the west opposite school buildings and the residential uses located to the east across from North Verdugo Road. Glendale Municipal Code Section 8.36.040 establishes daytime residential exterior noise levels at 55 dBA, and evening exterior noise levels at 45 dBA.

The construction activities associated with the proposed project could result in a temporary increase in ambient noise levels. Construction noise could be generated by dirt haulers, concrete mixers, materials delivery and on-site movement, and hand and power tools such as hammers, skill saws, pneumatic nail guns, and power drills, as well as by the arrival and departure of construction laborers and the on-site servicing of equipment. The City of Glendale Municipal Code Section 8.36.080 allows for noise resulting from construction activities to be exempt from noise limits established in the Code. In accordance with the Noise Ordinance, construction activities would also be limited to the hours of 7:00 a.m. and 7:00 p.m. on Monday through Saturday, and is prohibited on Sundays and federal holidays. Construction would not occur except during the times permitted in the Noise Ordinance, and the Municipal Code Section 8.36.080 allows construction noise in excess of standards to occur between these hours. The construction phase of the proposed project will be further analyzed in the EIR to verify that it complies with established standards.

Operation of the proposed project would not involve new uses at the Wilson MS practice field, rather, the proposed project would allow for the extended use of the project site past dusk by existing uses and the increase in use due to the utilization of the sports fields by city programs. Therefore, night time use that would utilize the field lighting would not result in new noise sources associated with uses on the practice field, but would result in changes to when these uses typically occur, as evening uses could more easily be accommodated as well as additional community uses of the field. City of Glendale Municipal Code Section 8.36.290(b) (Exemptions) specifically allows for:

Activities conducted on public parks or playgrounds and public or private school grounds including but not limited to school athletic and school entertainment events or outdoor activities such as public dances, shows, sporting events, and entertainment events provided such events are conducted pursuant to a permit issued by the City where otherwise required.

As impacts on noise are considered to be potentially significant, this topic will be further analyzed in the EIR.

**b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?**

**Potentially Significant Impact.** Vibration generated by construction-related activities on the proposed project site would be restricted by the requirements of the City's noise ordinance pursuant to the provisions of

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Municipal Code Section 8.36.080. The City's construction contractor for the proposed project would comply with all the cited sections of the Municipal Code. Implementation of the proposed project would not be expected to result in significant vibration-related environmental effects during the construction period, however, impacts will be further evaluated in the EIR.

- c) **A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?**

**Potentially Significant Impact.** The proposed project includes installation of lighting at the Wilson MS practice field which would allow for community use of the field until 10:00 p.m. This would result in the potential for an increase in evening noise levels due to community use. Increases in noise levels due to operational changes, as well as the potential for traffic noise increases will be further evaluated in the EIR.

- d) **A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?**

**Potentially Significant Impact.** Off-site single- and multi-family residential uses directly adjacent to the practice field to the north would experience temporary increases in noise levels during practice or community use events. Temporary and periodic increases in noise due to the proposed project will be further evaluated and discussed in the EIR.

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

**No Impact.** The proposed project site is located approximately 7 miles southeast of the Bob Hope Airport, located at 2627 North Hollywood Way in the City of Burbank. Accordingly, implementation of the proposed project would not expose people residing or working in the project area to excessive noise levels from private or public airports, and no impact would occur.

- f) **For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?**

**No Impact.** Refer to Response 12.e), above.

#### 3.13 POPULATION AND HOUSING

- a) **Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?**

**No Impact.** The project site is located within the established Wilson MS campus, and no new roads or extensions of existing roads that could enable development of undeveloped land are proposed. The proposed project does not include the construction of any new homes or businesses, and would not result in any change in school enrollment. The objective of the proposed project is to provide athletic field/track improvements

### 3. Environmental Analysis

and lighting. Therefore, no impacts involving direct or indirect increases in population growth would occur as a result of the proposed project.

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

**No Impact.** The project site is completely within the existing school boundaries. No residences would be displaced or removed as a result of the proposed project, and the proposed project would have no impact on existing housing. Therefore, no significant new housing impact would occur.

**c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?**

**No Impact.** The proposed project would not involve the removal or relocation of any housing and would therefore not displace any people or necessitate the construction of any replacement housing. Therefore, no significant new displacement impact would occur.

### 3.14 PUBLIC SERVICES

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

**a) Fire protection?**

**Less Than Significant Impact.** Fire prevention, fire protection, and emergency medical services in the project area are provided by the Glendale Fire Department. The proposed improvements would be constructed to meet the requirements of the state fire marshal. By adhering to the City's fire safety standards, the proposed project will not affect the Fire Department's performance objectives. Although the proposed improvements would result in additional usage of the site during organized events or practices, due to the nature of the facilities proposed, it is not anticipated that such conditions would substantially increase the need for fire protection services, alter response times, or adversely affect the department's ability to provide service to the site using existing equipment and personnel. Additionally, the City would have a Community Services & Parks Department employee on site during permitted field times when the school is not in use. Therefore, a less than significant impact would occur.

**b) Police protection?**

**Less Than Significant Impact.** Law enforcement services in the area are provided by the Glendale Police Department. Although the proposed improvements would result in additional usage of the site during organized events or practices, due to the nature of the facilities proposed, it is not anticipated that such conditions would substantially increase the need for police protection services, alter response times, or adversely affect the department's ability to provide service to the site using existing equipment and personnel.

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Additionally, the City would have a Community Services & Parks Department employee on site during permitted field times when the school is not in use. Therefore, a less than significant impact would occur.

#### c) Schools?

**No Impact.** The proposed project improvements would benefit students attending the existing Wilson MS, and would not result in an increase in student population. The proposed project would not result in land uses (e.g., housing) that would result in population growth or create a greater demand for school services. Therefore, no impact to schools would result from project implementation.

#### d) Parks?

**No Impact.** The proposed project is intended to allow for the construction and operation of new sports fields and lighting at the existing Wilson MS that would enhance recreational opportunities for athletes and enable community usage of the site. As such, the proposed project would not result in increased demand for additional park and recreation services either on-site or in the surrounding area. The proposed project would not cause an increase in area population that would have the potential to increase demands on the city's recreational amenities or public parks. As such, no impact with regard to parks would occur.

#### e) Other public facilities?

**No Impact.** The proposed project is designed to serve the existing and future student population at Wilson MS and to provide improved and expanded sports facilities for use by students and utilization of the sports fields by the community. No new population would be generated by the proposed uses; therefore, no increased demand on other public facilities is anticipated. The project would not significantly affect any other public facilities. No impact would occur.

### 3.15 RECREATION

#### a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?

**No Impact.** The project site is currently developed as a grass field. Implementation of the proposed project would result in the installation and operation of a turf field and running track, field lighting, and the construction of a restroom/storage facility, intended to better accommodate existing Wilson MS and community practice field users. No residential uses are proposed with the project that would have the potential to generate new population growth that could increase demand for local or regional recreational facilities or parks. Due to the nature of the land uses proposed, the proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities, nor would the proposed project require the construction or expansion of recreational facilities that would result in adverse physical effects on the environment. No impact with regard to recreation would occur.



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- b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

**No Impact.** Refer to Response 15.a), above

#### 3.16 TRANSPORTATION/TRAFFIC

- a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

**Potentially Significant Impact.** Main access to the Wilson MS campus is currently from Monterey Road. The proposed project will offer athletic fields that will be similar in nature to the existing facilities, but that will improve upon the quality and capabilities of the facilities to provide recreational opportunities for students and the community. With project implementation, the vehicle trips currently generated by Wilson MS sports field uses will be redistributed to area roadways within the project vicinity, and could increase, especially in the evenings. Additionally, as similar uses presently occur on-site, it is anticipated that project effects on the circulation system will generally be limited to late afternoon to evening and/or weekend hours, as this is when most people will attend practices or events at the site.

Construction of the proposed project would generate additional traffic on the existing area roadway network. These new vehicle trips would include construction workers traveling to the site as well as delivery trips associated with construction equipment and materials. Delivery of construction materials to the site would likely require a number of oversize vehicles that may travel at slower speeds than existing traffic and, due to their size, may intrude into adjacent travel lanes. These oversize trips may decrease the existing level of service (LOS) on area freeways, roadways, and/or at intersections. Additionally, the total number of vehicle trips associated with all construction-related traffic (including construction workers) could temporarily increase daily traffic volumes traveling on local roadways and intersections. Proposed project operations would also increase the daily traffic volumes on local roadways and at area intersections, as the proposed project would provide enhanced recreational facilities and nighttime lighting on-site, allowing for expanded sports field usage.

A traffic impact assessment (TIA) will be prepared for the proposed project to estimate trip generation, analyze effects on intersection operations, and review area roadway capacity and access during weekday evenings and weekends. Additionally, a parking study will be prepared to determine potential effects on the adequacy of on-site parking (existing and proposed), as well as to evaluate the potential for spillover parking on surrounding local streets to occur. The findings of the TIA will serve as the basis for evaluation of the project in the EIR to determine whether significant impacts with regard to transportation/traffic would occur with project implementation, and proper mitigation measures will be identified, if appropriate, to reduce any adverse effects.

For the reasons above, the proposed project will have the potential to conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system,

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including alternative modes of transportation. Thus, the effects of both the temporary construction-related traffic and operational-related traffic will be evaluated further in the EIR.

**b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?**

**Potentially Significant Impact.** Construction of the proposed project would generate vehicle trips and may require roadway lane closures, which could temporarily increase daily traffic volumes and congestion on local roadways and intersections. Operation of the proposed project would also generate trips on local roadways. Such events would have the potential to affect the existing level of service of area roadways or intersections. The proposed project would therefore have the potential to conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the County congestion management agency for designated roads or highways. The traffic analysis will be prepared in consultation with City of Glendale staff and according to requirements for the preparation of traffic impact studies in the City of Glendale and the Los Angeles County Congestion Management Plan. As a result, this topic will be further analyzed in the EIR.

**c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?**

**No Impact.** The proposed project site is located approximately 7 miles southeast of the Bob Hope Airport, located at 2627 North Hollywood Way in the City of Burbank. Bob Hope Airport is governed by the Los Angeles County Airport Land Use Commission Comprehensive Land Use Plan guidelines. This document is intended to provide for reasonable, safe, and efficient use of the airport as a public transportation facility, provide a base for aviation and aviation-related operations, and protect the municipal environment from the effects of aircraft noise. According to the Bob Hope Airport Influence Area Map, the proposed project site is not located in an airport land use plan area. The proposed project does not include an aviation component, and would not change air traffic patterns. No impact would occur.

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

**No Impact.** No off-site improvements are proposed or required to implement the proposed project. The main access points would be from the south side of the school site where existing surface parking lots are present. Other parking would be available in surrounding areas, off the school property. No new access drives or roadway improvements are proposed to provide access to the project site; therefore, no improvements that may result in hazardous conditions would occur. Additionally, the proposed project would not change the existing land use of the site, as the property currently is developed as sporting fields. The proposed project would not substantially increase hazards due to a design feature or incompatible uses and no impact would occur.

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

**Potentially Significant Impact.** Construction of the proposed project will generate construction vehicle trips, potential roadway lane closures, and potential increases in construction and operational traffic that could impact daily traffic volumes on local roadways and intersections, thereby impeding emergency access. A Traffic Control Plan will be prepared to address such issues, and it is anticipated that preparation of the plan will reduce any potential impacts relative to this topic to less than significant; however, the proposed project's potential impacts on emergency access will be further evaluated in the EIR.

**f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?**

**Potentially Significant Impact.** During construction, the project may have the potential to cause temporary disruption of the use of transportation facilities, or increase safety hazards, due to construction vehicles and materials traveling to and from the site or temporary lane closures. Operation of the project may also have the potential to temporarily decrease the performance of public transit, bicycle lanes, or pedestrian facilities during evening or weekend events due to traffic congestion or traffic control, and may also decrease public safety of those using such means of transit. As indicated above, a traffic control plan will be prepared to address such issues, and it is anticipated that preparation of the plan will reduce any potential impacts to less than significant; however, this topic will be further analyzed in the EIR.

**g) Result in inadequate parking capacity? (optional)**

**Potentially Significant Impact.** The proposed project would make use of existing street and on-site parking, and no change in site access or parking would occur. A parking demand evaluation will be provided and a site visit and parking counts will be conducted on a weekend evening and on a weekend to identify parking conditions and the current parking occupancy in the area. Parking demand will be calculated to review if there would be sufficient parking to accommodate the demand and how it would affect parking conditions in the surrounding neighborhoods. Impacts on parking will be further evaluated in the EIR. The results of the traffic and parking study will be documented in a technical report that incorporates the findings and all supporting calculations, and will be included as an appendix to the EIR.

## 3.17 TRIBAL CULTURAL RESOURCES

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

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

**Less Than Significant Impact.** As of July 1, 2015, Public Resources Code Sections 21080.1, 21080.3.1, and 21080.3.2 require public agencies to consult with California Native American tribes recognized by the NAHC

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for the purpose of mitigating impacts to tribal cultural resources. This law does not preclude agencies from initiating consultation with the tribes that are culturally and traditionally affiliated with their jurisdictions.

In accordance with Public Resources Code Section 21080.1(d), a lead agency is required to provide formal notification of intended development projects to Native American tribes that have requested to be on the lead agency's list for receiving such notification. The formal notification is required to include a brief description of the proposed project and its location, lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation for tribal cultural resources. The Soboba Band of Luiseno Indians and the Fernandeno Tataviam Band of Mission Indians are on the City of Glendale's notification list pursuant to AB 52. The City will notify those tribes and will consult with both tribes requesting consultation. The results of the consultation will be documented in the EIR.

The project would involve the installation of athletic field light fixtures, replacement of the field grass with synthetic turf, and the addition of a track. The installation of the athletic field lights would occur within the existing athletic field. No historic resources on the project site are listed in the City of Glendale General Plan, Historic Resources Element (Glendale 2017). The project site is not listed or eligible for listing in the California Register of Historical Resources (CRHR) or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k). As the property has been previously disturbed and currently supports similar sports field uses, it is not anticipated that unknown tribal cultural resources are present on-site. Impacts would be less than significant.

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

**Less Than Significant Impact.** The project would involve the installation of athletic field light fixtures, replacement of the field grass with synthetic turf, and the addition of a track. The installation of the athletic field lights would occur within the existing athletic field. No historic resources on the project site are listed in the City of Glendale General Plan, Historic Resources Element (Glendale 2017). The project site is not listed or eligible for listing in the California Register of Historical Resources (CRHR) or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k). As the property has been previously disturbed and currently supports similar sports field uses, it is not anticipated that unknown tribal cultural resources are present on-site. Impacts would be less than significant.

#### 3.18 UTILITIES AND SERVICE SYSTEMS

- a) **Exceed waste water treatment requirements of the applicable Regional Water Quality Control Board?**

**Less Than Significant Impact.** Implementation of the proposed project would result in the installation and operation of field lighting and the construction of a restroom/storage facility intended to better accommodate Wilson MS practice field users. The restroom and storage facility would include restroom, storage, electrical,

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and custodial uses. The Glendale Public Works Department (GPWD) provides sewer collection and treatment services in the City. Sewage from the City is treated by the City of Los Angeles Hyperion System, which includes the Los Angeles/Glendale Water Reclamation Plant, located outside the Glendale City limits in Los Angeles, and the Hyperion Treatment Plant, located in Playa del Rey. The City and the City of Los Angeles jointly own and share operating capacity of the Los Angeles/Glendale Water Reclamation Plant. Any City sewage not treated at the Los Angeles/Glendale Water Reclamation Plant is treated at the Hyperion Treatment Plant. As the proposed project would not increase student population at the Wilson MS Campus, the proposed project would not exceed wastewater treatment requirements and this impact would be less than significant.

**b) Require or result in the construction of new water or waste water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

**Less Than Significant Impact.** The proposed project site is located in an area served by an existing sewer collection and conveyance system, all of which are maintained by the GPWD. Because the existing on-site fields would be replaced with the proposed synthetic turf, water demand for purposes of irrigation would be substantially reduced as compared to existing conditions; however, some irrigation use would still be required for the project components. The new restroom associated with the project would connect to this existing system, which involves coordination with the GPWD regarding design, operation, and maintenance. All utility connections to the proposed project would be required to comply with applicable Uniform Codes, City ordinances, Public Works standards, and Water Division criteria. Implementation of the proposed project would not result in an increase in overall student population, and community uses would be limited to permitted activities, such that the net increase in wastewater generation is not anticipated to exceed the existing capacity. As such, construction of facilities or expansion of existing facilities would not be required. Impacts would be less than significant.

**c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

**Less Than Significant Impact.** The Wilson MS practice field is located in a developed area of the City of Glendale, which contains an existing stormwater collection and conveyance system. Development of the proposed project would reduce the amount of impervious coverage on other portions of the site where the restroom facility and light fixtures are proposed. The modification of impervious surfaces may reduce alteration of the existing stormwater drainage collection systems. As part of the proposed project, stormwater drainage plans will comply with regulatory requirements. Compliance with the Municipal Stormwater NPDES Permit would ensure that the capacity of the existing storm drainage infrastructure serving the project site would not be diminished and impacts of the proposed project to the storm drain system would be less than significant.

**d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?**

**Less Than Significant Impact.** The proposed project would increase water demand by a minor amount due to the new restroom at the proposed project site. The Campus' water supply would adequately supply the new restroom's water needed and, therefore, would have a less-than-significant impact to water supply.

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

**Less Than Significant Impact.** The proposed project site is located in an area served by an existing sewer collection and conveyance system, all of which are maintained by the GPWD. The new restroom associated with the project would connect to this existing system, which involves coordination with the GPWD regarding design, operation, and maintenance. All utility connections to the proposed project would be required to comply with applicable Uniform Codes, City ordinances, Public Works standards, and Water Division criteria. Since the overall student population will not change, there will not be a net increase in wastewater generation. Impacts would be less than significant.

- f) **Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?**

**Less Than Significant Impact.** Operation of the proposed project would not generate solid waste at the proposed project site other than minor landscaping cuttings. Construction activity related solid waste would be disposed of at the landfills that serve the City of Glendale. The construction related solid waste contribution to any of the landfills under the proposed project would be less than 0.1 percent. The California Integrated Waste Management Act of 1989 (AB 939) requires city and county jurisdictions to identify an implementation schedule to divert 50 percent of the total waste stream from landfill disposal by the year 2000 and 70 percent by the year 2020. In addition, given current and future landfill capacity, the solid waste impacts resulting from implementation of the proposed project would be less than significant.

- g) **Comply with federal, state, and local statutes and regulations related to solid waste?**

**Less Than Significant Impact.** A significant impact would occur if the proposed project were to generate solid waste that is not disposed of in accordance with applicable regulations. As stated above, the proposed project would not result in a significant increase in the demand for solid waste services compared to existing conditions. As under current conditions, solid waste generated on site would be disposed of in accordance with all applicable federal, state, and local regulations related to solid waste. In addition, as the proposed project site is located within California, it would be required to comply with the California Integrated Waste Management Act of 1989 (AB 939) which was enacted to reduce, recycle, and reuse solid waste generated in the state to the maximum amount feasible. Specifically, the Act requires city and county jurisdictions to identify an implementation schedule to divert 50 percent of the total waste stream from landfill disposal by the year 2000 and 70 percent by the year 2020. Therefore, impacts would be less than significant.

### 3. Environmental Analysis

#### 3.19 MANDATORY FINDINGS OF SIGNIFICANCE

- a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

**Less Than Significant Impact.** The site is presently developed with athletic fields and courts, and ongoing maintenance of the existing facilities (i.e. mowing) greatly reduces the potential for sensitive habitat or species to be present on-site. The proposed project site is located within an urban and fully developed area, and would not have an impact on the habitat or population level of fish or wildlife species; threaten a plant or animal community; or impact the range of a rare or endangered plant or animal. The potential exists for as-yet undiscovered archaeological resources, paleontological resources, or human remains to be encountered during excavation and grading activities. Conformance with standard protocols for the discovery of such resources will ensure that project impacts remain less than significant.

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

**Potentially Significant Impact.**

Aesthetics

The project would result in new sources of light and glare, thereby contributing to existing sources of light and glare already generated by existing development in surrounding areas, the overall city, and the Los Angeles region as a whole. The EIR will evaluate the proposed project’s contribution to cumulative impacts as further technical study is undertaken.

Agricultural Resources

The site is located in a highly-urbanized area and is currently developed with sports fields associated with Wilson MS. No agricultural or forestry resources are present on-site or on surrounding lands, and therefore, the project would not have the potential to contribute to a cumulatively considerable impact on agricultural or forestry resources. No further analysis in the EIR is warranted.

Air Quality

The proposed project has the potential to contribute to cumulative air quality impacts relative to construction and operation, and sensitive receptors are located within the project vicinity. The potential for the project to contribute to a cumulatively considerable impact though conflict with the applicable air quality plan, violation of any air quality standard, contribution to a cumulatively considerable net increase of any criteria pollutant for

### 3. Environmental Analysis

which the project region is nonattainment, or exposure of sensitive receptors to substantial pollutant concentrations, will be further evaluated in the EIR and as identified through additional technical analysis.

#### Biological Resources

The site is presently developed with athletic fields and courts, and ongoing maintenance of the existing facilities (e.g., mowing) greatly reduces the potential for sensitive habitat or species to be present on-site. No trees on-site will be removed with the proposed project. This topic does not warrant further evaluation in the EIR.

#### Cultural Resources

The proposed project would not impact any historical resources on-site. The City's General Plan indicates that no known cultural resources are present on the site. Additionally, as the site has been previously developed, the potential for discovery of human remains is low. Standard protocols would be followed in the event of discovery of any unknown resources during construction to ensure that potential impacts do not occur. Due to the unlikely presence of cultural resources or human remains on-site, combined with adherence to established standards, it is not anticipated that the project would contribute to a cumulatively considerable impact on such resources. This topic does not warrant further evaluation in the EIR.

#### Geology and Soils

Impacts relative to geology and soils are generally site-specific. The on-site improvements would be subject to strong seismic ground shaking, liquefaction, and other seismic and geologic hazards. The project would be subject to compliance with local and state design and construction requirements, including those implemented by the Division of the State Architect (DSA), to reduce the potential for damage and/or risk to public safety to occur. With such conformance, project impacts relative to geology and soils would be less than cumulatively considerable. This topic does not warrant further evaluation in the EIR.

#### Greenhouse Gas Emissions

Due to the nature of global climate change, it is not anticipated that any single development project would have a substantial effect on global climate change. In actuality, GHG emissions from the proposed project would combine with emissions emitted across California, the United States, and the world to cumulatively contribute to global climate change. As such, the proposed project has the potential to contribute to cumulative impacts with regard to greenhouse gases and climate change through project construction. The potential for the project to contribute to a cumulatively considerable impact with regard to GHGs will be further evaluated in the EIR and as identified through additional technical analysis.

#### Hazards and Hazardous Materials

The proposed project has the potential to contribute to cumulative impacts with regard to hazardous materials, as it would replace the existing on-site grass turf with synthetic turf and would have the potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of Wilson MS through project construction and routine maintenance activities. Project conformance with established local, state, and federal standards for the handling, use, and/or disposal of



### 3. Environmental Analysis

hazardous materials during construction and/or operation would ensure that the project does not contribute to a cumulatively considerable impact with regard to hazards and hazardous materials. This topic does not warrant further evaluation in the EIR.

#### Hydrology and Water Quality

The proposed project has the potential to contribute to cumulative impacts with regard to hydrology and water quality, as proposed improvements on the site would alter existing drainage patterns and would have the potential to contribute to stormwater runoff to downstream water bodies. The project would be required to comply with local, state, and federal requirements pertaining to stormwater quality, including requirements of the NPDES permit and preparation of a SWPPP. Project conformance with such requirements would ensure that the project does not adversely impact hydrology and/or water quality and that impacts would remain less than cumulatively considerable. This topic does not warrant further evaluation in the EIR.

#### Land Use and Planning

The proposed project would result in the development of land uses similar to that which presently occur on-site. The project is not anticipated to create development that would physically divide an established community, conflict with any applicable land use plan or policy, or conflict with any applicable habitat conservation plan or natural community conservation plan. No impacts would occur with project implementation, and therefore, the project is not considered to have the potential to contribute to a cumulatively considerable impact with regard to land use and planning. No further analysis in the EIR is warranted.

#### Mineral Resources

The project site is located in a highly-urbanized area and is currently developed with sports fields associated with Wilson MS. No mineral resources are present on-site or on surrounding lands, and therefore, the project would not have the potential to contribute to a cumulatively considerable impact on mineral resources. No further analysis in the EIR is warranted.

#### Noise

The proposed project has the potential to contribute to cumulative impacts with regard to construction noise, as well as operational noise, and sensitive receptors are located within the project vicinity. The potential for the project to contribute to a cumulatively considerable impact with regard to noise will be further evaluated in the EIR and as identified through additional technical analysis.

#### Population and Housing

The project is intended to allow Wilson MS and the City to better accommodate the recreational needs of the existing area student population and community, rather than causing demand for new recreational facilities to be financed and constructed on public lands elsewhere in the city. No housing is proposed, and the project will not require the removal/replacement of any housing structures or displacement of residents, as none are present on-site. As such, no impact relative to population or housing would occur, and the project would not contribute to a cumulatively considerable impact. No further analysis in the EIR is warranted.

### 3. Environmental Analysis

#### Public Services

The project would not substantially increase existing demand for fire or police protection services, and would not generate population that would increase existing demand on schools, recreational facilities or parks, or other public services. Therefore, the project would not contribute to a cumulatively considerable impact relative to public services. No further analysis in the EIR is warranted.

#### Recreation

The proposed project involves replacing the grass field with synthetic turf and developing a rubberized jogging track, field lighting and a bathroom/storage facility. No housing is proposed that would generate population growth in the area or increase demand for recreational resources or parks. Therefore, the project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated, or include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment. The project would not contribute to a cumulatively considerable impact with regard to recreation. No further analysis in the EIR is warranted.

#### Transportation/Traffic

The proposed project has the potential to contribute to cumulative impacts with regard to transportation and traffic. The project will add additional vehicle trips to local roadways and intersections, and may therefore contribute to an existing unacceptable LOS or create a new impact, or conflict with an adopted congestion management or alternative transportation plan or program. Additionally, the project may contribute to a cumulative effect on emergency access during project construction if the project interferes with the ability of local service providers to access the site. As such, the project's contribution to cumulative impacts relative to transportation and traffic will be further evaluated in the EIR and as identified through additional technical analysis.

#### Tribal Cultural Resources

The proposed project would not impact any tribal historical resources on-site. Additionally, as the site has been previously developed, the potential for discovery of tribal remains is low. Results of any tribal consultation efforts will be fully summarized and evaluated in the EIR, if applicable.

#### Utilities and Service Systems

Due to the nature of the improvements proposed, the proposed project will not substantially increase the High School's demands on public utilities over that which currently exist. Further, the demand for water used for irrigation purposes will be decreased with the project; however, the synthetic turf fields would still require watering to reduce overall heat effects. All utilities and services are adequate to serve the project without the construction or expansion of new infrastructure. Therefore, the project would not contribute to a cumulatively considerable impact with regard to utilities and public services. No further analysis in the EIR is warranted.

### 3. Environmental Analysis

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

**Potentially Significant Impact.** The proposed project has the potential to cause substantial adverse effects on human beings, either directly or indirectly, with particular regard for aesthetics, air quality, greenhouse gases, noise, and traffic. Potential adverse effects on human beings will be further evaluated in the EIR.

### 3. Environmental Analysis

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## 5. List of Preparers

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### **LEAD AGENCY**

Peter Vierheilig, Project Manager

### **PLACEWORKS**

Julian Capata – Senior Associate, School Facilities Planning

Robyn Chaconas – Project Engineer

Cary Nakama, Graphic Designer

## 5. List of Preparers

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## Appendices

### **Appendix A2      Comments Letters on NOP**

## Appendices

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## NATIVE AMERICAN HERITAGE COMMISSION

Environmental and Cultural Department  
1550 Harbor Blvd., Suite 100  
West Sacramento, CA 95691  
Phone (916) 373-3710



August 25, 2017

Peter Vierheilig  
City of Glendale  
613 E. Broadway, Room 14  
Glendale, CA 91206

Sent via e-mail: [pvierheilig@glendaleca.gov](mailto:pvierheilig@glendaleca.gov)

RE: SCH# 2017081003; Wilson Middle School Multi-Purpose Field Project, City of Glendale; Los Angeles County, California

Dear Mr. Vierheilig:

The Native American Heritage Commission has received the Notice of Preparation (NOP) for Draft Environmental Impact Report for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code § 21000 et seq.), specifically Public Resources Code section 21084.1, states that a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, § 15064.5 (b) (CEQA Guidelines Section 15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an environmental impact report (EIR) shall be prepared. (Pub. Resources Code § 21080 (d); Cal. Code Regs., tit. 14, § 15064 subd. (a)(1) (CEQA Guidelines § 15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources with the area of project effect (APE).

**CEQA was amended significantly in 2014.** Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a **separate category of cultural resources**, "tribal cultural resources" (Pub. Resources Code § 21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment (Pub. Resources Code § 21084.2). Please reference California Natural Resources Agency (2016) "Final Text for tribal cultural resources update to Appendix G: Environmental Checklist Form," <http://resources.ca.gov/ceqa/docs/ab52/Clean-final-AB-52-App-G-text-Submitted.pdf>. Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code § 21084.3 (a)). **AB 52 applies to any project for which a notice of preparation or a notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. § 800 et seq.) may also apply.

The NAHC recommends **lead agencies consult with all California Native American tribes** that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments. **Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.**

## AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a **lead agency** shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
  - a. A brief description of the project.
  - b. The lead agency contact information.
  - c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code § 21080.3.1 (d)).
  - d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code § 21073).
2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A **lead agency** shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code § 21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or environmental impact report. (Pub. Resources Code § 21080.3.1(b)).
  - a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code § 65352.4 (SB 18). (Pub. Resources Code § 21080.3.1 (b)).
3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
  - a. Alternatives to the project.
  - b. Recommended mitigation measures.
  - c. Significant effects. (Pub. Resources Code § 21080.3.2 (a)).
4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
  - a. Type of environmental review necessary.
  - b. Significance of the tribal cultural resources.
  - c. Significance of the project's impacts on tribal cultural resources.
  - d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code § 21080.3.2 (a)).
5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code sections 6254 (r) and 6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code § 21082.3 (c)(1)).
6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
  - a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
  - b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code section 21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code § 21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:
  - a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
  - b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code § 21080.3.2 (b)).
8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code section 21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code section 21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code § 21082.3 (a)).
9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code section 21084.3 (b). (Pub. Resources Code § 21082.3 (e)).
10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:
  - a. Avoidance and preservation of the resources in place, including, but not limited to:
    - i. Planning and construction to avoid the resources and protect the cultural and natural context.
    - ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
  - b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
    - i. Protecting the cultural character and integrity of the resource.
    - ii. Protecting the traditional use of the resource.
    - iii. Protecting the confidentiality of the resource.
  - c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
  - d. Protecting the resource. (Pub. Resource Code § 21084.3 (b)).
  - e. Please note that a federally recognized California Native American tribe or a nonfederally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code § 815.3 (c)).
  - f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code § 5097.991).
11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An environmental impact report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
  - a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code sections 21080.3.1 and 21080.3.2 and concluded pursuant to Public Resources Code section 21080.3.2.
  - b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
  - c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code section 21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code § 21082.3 (d)).

*This process should be documented in the Cultural Resources section of your environmental document.*

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: [http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation\\_CalEPAPDF.pdf](http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf)

## SB 18

SB 18 applies to local governments and requires **local governments** to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code § 65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: [https://www.opr.ca.gov/docs/09\\_14\\_05\\_Updated\\_Guidelines\\_922.pdf](https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf)

Some of SB 18's provisions include:

1. **Tribal Consultation:** If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code § 65352.3 (a)(2)).
2. **No Statutory Time Limit on SB 18 Tribal Consultation.** There is no statutory time limit on SB 18 tribal consultation.
3. **Confidentiality:** Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code section 65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code sections 5097.9 and 5097.993 that are within the city's or county's jurisdiction. (Gov. Code § 65352.3 (b)).
4. **Conclusion of SB 18 Tribal Consultation:** Consultation should be concluded at the point in which:
  - a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
  - b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: <http://nahc.ca.gov/resources/forms/>

## NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center ([http://ohp.parks.ca.gov/?page\\_id=1068](http://ohp.parks.ca.gov/?page_id=1068)) for an archaeological records search. The records search will determine:
  - a. If part or all of the APE has been previously surveyed for cultural resources.
  - b. If any known cultural resources have been already been recorded on or adjacent to the APE.
  - c. If the probability is low, moderate, or high that cultural resources are located in the APE.
  - d. If a survey is required to determine whether previously unrecorded cultural resources are present.
2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
  - a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.



- b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.
- 3. Contact the NAHC for:
  - a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
  - b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.
- 4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
  - a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, section 15064.5(f) (CEQA Guidelines section 15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
  - b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
  - c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code section 7050.5, Public Resources Code section 5097.98, and Cal. Code Regs., tit. 14, section 15064.5, subdivisions (d) and (e) (CEQA Guidelines section 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

Please contact me if you need any additional information at [gayle.totton@nahc.ca.gov](mailto:gayle.totton@nahc.ca.gov).

Sincerely,



Gayle Totton, M.A., PhD.  
Associate Governmental Program Analyst

cc: State Clearinghouse



# South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178  
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SENT VIA USPS AND E-MAIL:

August 23, 2017

[Pvierheilig@Glendaleca.gov](mailto:Pvierheilig@Glendaleca.gov)

Peter Vierheilig, Project Manager  
City of Glendale Community Services & Parks  
613 East Broadway Room 120  
Glendale, California 91206

## **Notice of Preparation of Environmental Impact Report for the Wilson Middle School Multi-Purpose Field Project**

South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document. SCAQMD staff's comments are recommendations regarding the analysis of potential air quality impacts from the Proposed Project that should be included in the Environmental Impact Report (EIR). Please send SCAQMD a copy of the EIR upon its completion. Note that copies of the EIR that are submitted to the State Clearinghouse are not forwarded to SCAQMD. Please forward a copy of the EIR directly to SCAQMD at the address shown in the letterhead. **In addition, please send with the EIR all appendices or technical documents related to the air quality, health risk, and greenhouse gas analyses and electronic versions of all air quality modeling and health risk assessment files<sup>1</sup>. These include emission calculation spreadsheets and modeling input and output files (not PDF files). Without all files and supporting documentation, SCAQMD staff will be unable to complete our review of the air quality analyses in a timely manner. Any delays in providing all supporting documentation will require additional time for review beyond the end of the comment period.**

### **Air Quality Analysis**

SCAQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. SCAQMD staff recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from SCAQMD's Subscription Services Department by calling (909) 396-3720. More recent guidance developed since this Handbook was published is also available on SCAQMD's website at: [http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-\(1993\)](http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993)). SCAQMD staff also recommends that the Lead Agency use the CalEEMod land use emissions software. This software has recently been updated to incorporate up-to-date state and locally approved emission factors and methodologies for estimating pollutant emissions from typical land use development. CalEEMod is the only software model maintained by the California Air Pollution Control Officers Association (CAPCOA) and replaces the now outdated URBEMIS. This model is available free of charge at: [www.caleemod.com](http://www.caleemod.com).

SCAQMD has also developed both regional and localized significance thresholds. SCAQMD staff requests that the Lead Agency quantify criteria pollutant emissions and compare the results to SCAQMD's CEQA regional pollutant emissions significance thresholds to determine air quality impacts.

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<sup>1</sup> Pursuant to the CEQA Guidelines Section 15174, the information contained in an EIR shall include summarized technical data, maps, plot plans, diagrams, and similar relevant information sufficient to permit full assessment of significant environmental impacts by reviewing agencies and members of the public. Placement of highly technical and specialized analysis and data in the body of an EIR should be avoided through inclusion of supporting information and analyses as appendices to the main body of the EIR. Appendices to the EIR may be prepared in volumes separate from the basic EIR document, but shall be readily available for public examination and shall be submitted to all clearinghouses which assist in public review.



SCAQMD's CEQA regional pollutant emissions significance thresholds can be found here: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>. In addition to analyzing regional air quality impacts, SCAQMD staff recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs). LSTs can be used in addition to the recommended regional significance thresholds as a second indication of air quality impacts when preparing a CEQA document. Therefore, when preparing the air quality analysis for the Proposed Project, it is recommended that the Lead Agency perform a localized analysis by either using the LSTs developed by SCAQMD staff or performing dispersion modeling as necessary. Guidance for performing a localized air quality analysis can be found at: <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds>.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the Proposed Project and all air pollutant sources related to the Proposed Project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, such as sources that generate or attract vehicular trips, should be included in the analysis.

In the event that the Proposed Project generates or attracts vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the Lead Agency perform a mobile source health risk assessment. Guidance for performing a mobile source health risk assessment ("*Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*") can be found at: <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis>. An analysis of all toxic air contaminant impacts due to the use of equipment potentially generating such air pollutants should also be included.

In addition, guidance on siting incompatible land uses (such as placing homes near freeways) can be found in the California Air Resources Board's *Air Quality and Land Use Handbook: A Community Health Perspective*, which can be found at: <http://www.arb.ca.gov/ch/handbook.pdf>. CARB's Land Use Handbook is a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. Guidance<sup>2</sup> on strategies to reduce air pollution exposure near high-volume roadways can be found at: [https://www.arb.ca.gov/ch/rd\\_technical\\_advisory\\_final.PDF](https://www.arb.ca.gov/ch/rd_technical_advisory_final.PDF).

### **Mitigation Measures**

In the event that the Proposed Project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation to minimize these impacts. Pursuant to CEQA Guidelines Section 15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed. Several resources are available to assist the Lead Agency with identifying potential mitigation measures for the Proposed Project, including:

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<sup>2</sup> In April 2017, CARB published a technical advisory, *Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways: Technical Advisory*, to supplement CARB's *Air Quality and Land Use Handbook: A Community Health Perspective*. This technical advisory is intended to provide information on strategies to reduce exposures to traffic emissions near high-volume roadways to assist land use planning and decision-making in order to protect public health and promote equity and environmental justice. The technical advisory is available at: <https://www.arb.ca.gov/ch/landuse.htm>.

- Chapter 11 of SCAQMD's *CEQA Air Quality Handbook*
- SCAQMD's CEQA web pages available here: <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mitigation-measures-and-control-efficiencies>
- SCAQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook for controlling construction-related emissions and Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities
- SCAQMD's Mitigation Monitoring and Reporting Plan (MMRP) for the 2016 Air Quality Management Plan (2016 AQMP) available here (starting on page 86): <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2017/2017-mar3-035.pdf?sfvrsn=5>
- CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures* available here: <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>

### **Alternatives**

In the event that the Proposed Project generates significant adverse air quality impacts, CEQA requires the consideration and discussion of alternatives to the project or its location which are capable of avoiding or substantially lessening any of the significant effects of the project. The discussion of a reasonable range of potentially feasible alternatives, including a “no project” alternative, is intended to foster informed decision-making and public participation. Pursuant to CEQA Guidelines Section 15126.6(d), the EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the Proposed Project.

### **Permits**

In the event that the Proposed Project requires a permit from SCAQMD, SCAQMD should be identified as a responsible agency for the Proposed Project. For more information on permits, please visit SCAQMD webpage at: <http://www.aqmd.gov/home/permits>. Questions on permits can be directed to SCAQMD's Engineering and Permitting staff at (909) 396-3385.

### **Data Sources**

SCAQMD rules and relevant air quality reports and data are available by calling SCAQMD's Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available at SCAQMD's webpage (<http://www.aqmd.gov>).

SCAQMD staff is available to work with the Lead Agency to ensure that project air quality impacts are accurately evaluated and any significant impacts are mitigated where feasible. If you have any questions regarding this letter, please contact me at [lsun@aqmd.gov](mailto:lsun@aqmd.gov) or call me at (909) 396-3308.

Sincerely,

*Lijin Sun*

Lijin Sun, J.D.

Program Supervisor, CEQA IGR

Planning, Rule Development & Area Sources

LS

LAC170803-01

Control Number



Edmund G. Brown Jr.  
Governor

STATE OF CALIFORNIA  
Governor's Office of Planning and Research  
State Clearinghouse and Planning Unit



Ken Alex  
Director

**Notice of Preparation**

August 2, 2017

To: Reviewing Agencies

Re: Wilson Middle School Multi-Purpose Field Project  
SCH# 2017081003

Attached for your review and comment is the Notice of Preparation (NOP) for the Wilson Middle School Multi-Purpose Field Project draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Peter Vierheilig  
City of Glendale  
613 E. Broadway, Room 14  
Glendale, CA 91206

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan  
Director, State Clearinghouse

Attachments  
cc: Lead Agency



**Document Details Report  
State Clearinghouse Data Base**

**SCH#** 2017081003  
**Project Title** Wilson Middle School Multi-Purpose Field Project  
**Lead Agency** Glendale, City of

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**Type** NOP Notice of Preparation

**Description** The proposed project would result in the redevelopment of the existing grass field and paved basketball courts with a joint use multi-purpose synthetic turf field with football, soccer and lacrosse markings and surrounding rubberized surface jogging track, fitness equipment, perimeter security fence with privacy screening, restroom and storage/maintenance building(s), walkways, landscaping, irrigation, re-grading of the existing basketball court surface, and sports field lighting. The City's use of the proposed field would be from 5:00 p.m. to 10:00 p.m. Monday through Friday, and 8:00 a.m. to 10:00 p.m. on Saturday and Sunday. No permanent seating or bleachers are proposed. The project would not introduce new uses to project site; rather, the proposed project would allow for the extended use of the project site by outside sporting groups during nighttime hours.

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**Lead Agency Contact**

**Name** Peter Vierheilig  
**Agency** City of Glendale  
**Phone** 818-548-2000 **Fax**  
**email**  
**Address** 613 E. Broadway, Room 14  
**City** Glendale **State** CA **Zip** 91206

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**Project Location**

**County** Los Angeles  
**City** Glendale  
**Region**  
**Cross Streets** Monterey Road and Verdugo Rd.  
**Lat / Long** 34° 9.25' 44" N / 118° 14' 17.5" W  
**Parcel No.**  
**Township** 1 **Range** 13W **Section** **Base**

---

**Proximity to:**

**Highways** SR 134  
**Airports**  
**Railways**  
**Waterways**  
**Schools** Wilson Middle School  
**Land Use** Z: R1 - Low Density Residential/Gneeral Plan: Public/Semi-public

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**Project Issues** Aesthetic/Visual; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Flood Plain/Flooding; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Water Quality; Landuse

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**Reviewing Agencies** Resources Agency; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Wildlife, Region 5; Native American Heritage Commission; California Highway Patrol; Caltrans, District 7; Regional Water Quality Control Board, Region 4

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**Date Received** 08/02/2017 **Start of Review** 08/02/2017 **End of Review** 08/31/2017

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Resources Agency

☒ Resources Agency  
Nadell Gayou

☐ Dept. of Boating & Waterways  
Denise Peterson

☐ California Coastal Commission  
Elizabeth A. Fuchs

☐ Colorado River Board  
Lisa Johansen

☐ Dept. of Conservation  
Crina Chan

☐ Cal Fire  
Dan Foster

☐ Central Valley Flood Protection Board  
James Herola

☐ Office of Historic Preservation  
Ron Parsons

☒ Dept. of Parks & Recreation  
Environmental Stewardship Section

☐ S.F. Bay Conservation & Dev't. Comm.  
Steve Goldbeck

☒ Dept. of Water Resources  
Resources Agency  
Nadell Gayou

Fish and Game

☐ Depart. of Fish & Wildlife  
Scott Flint  
Environmental Services Division

☐ Fish & Wildlife Region 1  
Curt Babcock

☐ Fish & Wildlife Region 1E  
Laure Harnsberger

☐ Fish & Wildlife Region 2  
Jeff Drongesen

☐ Fish & Wildlife Region 3  
Craig Weighlman

☐ Fish & Wildlife Region 4  
Julie Vance

☒ Fish & Wildlife Region 5  
Leslie Newton-Reed  
Habitat Conservation Program

☐ Fish & Wildlife Region 6  
Tiffany Ellis  
Habitat Conservation Program

☐ Fish & Wildlife Region 6 I/M  
Heidi Calvert  
Inyo/Mono, Habitat Conservation Program

☐ Dept. of Fish & Wildlife M  
William Paznokas  
Marine Region

Other Departments

☐ California Department of Education  
Lesley Taylor

☐ OES (Office of Emergency Services)  
Monique Wilber

☐ Food & Agriculture  
Sandra Schubert  
Dept. of Food and Agriculture

☐ Dept. of General Services  
Cathy Buck  
Environmental Services Section

☐ Housing & Comm. Dev.  
CEQA Coordinator  
Housing Policy Division

Independent Commissions, Boards

☐ Delta Protection Commission  
Erik Vink

☐ Delta Stewardship Council  
Kevan Samsam

☐ California Energy Commission  
Eric Knight

☒ Native American Heritage Comm.

Debbie Treadway

☐ Public Utilities Commission  
Supervisor

☐ Santa Monica Bay Restoration  
Guangyu Wang

☐ State Lands Commission  
Jennifer Deleong

☐ Tahoe Regional Planning Agency (TRPA)  
Cherry Jacques

Cal State Transportation Agency CalSTA

☐ Caltrans - Division of Aeronautics  
Phillip Crimmins

☐ Caltrans - Planning  
HQ LD-IGR  
Christian Bushong

☒ California Highway Patrol  
Suzann Ikeuchi  
Office of Special Projects

Dept. of Transportation

☐ Caltrans, District 1  
Rex Jackman

☐ Caltrans, District 2  
Marcelino Gonzalez

☐ Caltrans, District 3  
Eric Federicks - South  
Susan Zanchi - North

☐ Caltrans, District 4  
Patricia Maurice

☐ Caltrans, District 5  
Larry Newland

☐ Caltrans, District 6  
Michael Navarro

☒ Caltrans, District 7  
Diana Watson

☐ Caltrans, District 8  
Mark Roberts

☐ Caltrans, District 9  
Gayle Rosander

☐ Caltrans, District 10  
Tom Dumas

☐ Caltrans, District 11  
Jacob Armstrong

☐ Caltrans, District 12  
Maureen El Harake

Cal EPA

Air Resources Board

☐ Airport & Freight  
Jack Wursten

☐ Transportation Projects  
Nesamani Kalandiyur

☐ Industrial/Energy Projects  
Mike Tolstrup

☐ California Department of Resources, Recycling & Recovery  
Sue O'Leary

☐ State Water Resources Control Board  
Regional Programs Unit  
Division of Financial Assistance

☐ State Water Resources Control Board  
Cindy Forbes - Asst Deputy  
Division of Drinking Water

☐ State Water Resources Control Board  
State Water Resources Control Div. Drinking Water # \_\_\_\_\_

☐ State Water Resources Control Board  
Student Intern, 401 Water Quality Certification Unit  
Division of Water Quality

☐ State Water Resources Control Board  
Phil Crader  
Division of Water Rights

☐ Dept. of Toxic Substances Control  
CEQA Tracking Center

☐ Department of Pesticide Regulation  
CFOA Coordinator

Regional Water Quality Control Board (RWQCB)

☐ RWQCB 1  
Cathleen Hudson  
North Coast Region (1)

☐ RWQCB 2  
Environmental Document Coordinator  
San Francisco Bay Region (2)

☐ RWQCB 3  
Central Coast Region (3)

☒ RWQCB 4  
Teresa Rodgers  
Los Angeles Region (4)

☐ RWQCB 5S  
Central Valley Region (5)

☐ RWQCB 5F  
Central Valley Region (5)  
Fresno Branch Office

☐ RWQCB 5R  
Central Valley Region (5)  
Redding Branch Office

☐ RWQCB 6  
Lahontan Region (6)

☐ RWQCB 6V  
Lahontan Region (6)  
Victorville Branch Office

☐ RWQCB 7  
Colorado River Basin Region (7)

☐ RWQCB 8  
Santa Ana Region (8)

☐ RWQCB 9  
San Diego Region (9)

☐ Other \_\_\_\_\_

\_\_\_\_\_

☐

Conservancy





2017081003

**Notice of Completion & Environmental Document Transmittal**

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613

For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

**Project Title:** Wilson Middle School Multi-Purpose Field Project**Lead Agency:** Glendale Community Services & Parks Department**Contact Person:** Peter Vierheilg, Project Manager**Mailing Address:** 613 East Broadway, Room 14**Phone:** 818.548.2000**City:** Glendale**Zip:** 91206**County:** Los Angeles**Project Location:** County: Los Angeles

City/Nearest Community: Glendale

**Cross Streets:** Monterey Road and Verdugo Road**Zip Code:** 91206**Longitude/Latitude (degrees, minutes and seconds):** 34 ° 9.25 ' 44 " N / 118 ° 14 ' 17.5 " W **Total Acres:** 3.85**Assessor's Parcel No.:** N/A**Section:** S**Twp.:** T1**Range:** R13W**Base:****Within 2 Miles:** State Hwy #: SR-134**Waterways:** N/A**Airports:** N/A**Railways:** N/A**Schools:** Wilson Middle School**Document Type:****CEQA:** ☒ NOP☐ Early Cons☐ Neg Dec☐ Mit Neg Dec☐ Draft EIR☐ Supplement/Subsequent EIR

(Prior SCH No.)

Other:

**NEPA:**☐ NOI☐ EA☐ Draft EIS☐ FONSI**Other:**☐ Joint Document☐ Final Document☐ Other:

Governor's Office of Planning &amp; Research

**Local Action Type:**☐ General Plan Update☐ General Plan Amendment☐ General Plan Element☐ Community Plan☐ Specific Plan☐ Master Plan☐ Planned Unit Development☐ Site Plan☐ Rezone☐ Prezone☐ Use Permit☐ Land Division (Subdivision, etc.)

STATE CLEARINGHOUSE

☐ Annexation☒ Redevelopment☐ Coastal Permit☐ Other:**Development Type:**☐ Residential: Units

Acres

☐ Office: Sq.ft.

Acres

Employees

☐ Commercial: Sq.ft.

Acres

Employees

☐ Industrial: Sq.ft.

Acres

Employees

☐ Educational:☒ Recreational: Field Lighting for 10,000 sf Multi-purpose field☐ Water Facilities: Type

MGD

☐ Transportation: Type☐ Mining: Mineral☐ Power: Type

MW

☐ Waste Treatment: Type

MGD

☐ Hazardous Waste: Type☐ Other:**Project Issues Discussed in Document:**☒ Aesthetic/Visual☐ Agricultural Land☒ Air Quality☒ Archeological/Historical☒ Biological Resources☐ Coastal Zone☒ Drainage/Absorption☐ Economic/Jobs☐ Fiscal☒ Flood Plain/Flooding☐ Forest Land/Fire Hazard☒ Geologic/Seismic☒ Minerals☒ Noise☒ Population/Housing Balance☒ Public Services/Facilities☒ Recreation/Parks☒ Schools/Universities☐ Septic Systems☒ Sewer Capacity☒ Soil Erosion/Compaction/Grading☒ Solid Waste☒ Toxic/Hazardous☒ Traffic/Circulation☐ Vegetation☒ Water Quality☐ Water Supply/Groundwater☐ Wetland/Riparian☒ Growth Inducement☒ Land Use☐ Cumulative Effects☐ Other:**Present Land Use/Zoning/General Plan Designation:****Zoning:** R1 - Low Density Residential/ General Plan: Public/Semi-Public**Project Description:** (please use a separate page if necessary)

The proposed project would result in the redevelopment of the existing grass field and paved basketball courts with a joint use multi-purpose synthetic turf field with football, soccer and lacrosse markings and surrounding rubberized surface jogging track, fitness equipment, perimeter security fence with privacy screening, restroom and storage/maintenance building(s), walkways, landscaping, irrigation, re-grading of the existing basketball court surface, and sports field lighting. The City's use of the proposed field would be from 5:00 p.m. to 10:00 p.m. Monday through Friday, and 8:00 a.m. to 10:00 p.m. on Saturday and Sunday. No permanent seating or bleachers are proposed. The project would not introduce new uses to the project site; rather, the proposed project would allow for the extended use of the project site by outside sporting groups during nighttime hours.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

## Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "X".  
If you have already sent your document to the agency please denote that with an "S".

<input checked="" type="checkbox"/> Air Resources Board	<input type="checkbox"/> Office of Historic Preservation
<input type="checkbox"/> Boating & Waterways, Department of	<input checked="" type="checkbox"/> Office of Public School Construction
<input type="checkbox"/> California Emergency Management Agency	<input checked="" type="checkbox"/> Parks & Recreation, Department of
<input type="checkbox"/> California Highway Patrol	<input type="checkbox"/> Pesticide Regulation, Department of
<input checked="" type="checkbox"/> Caltrans District #7	<input type="checkbox"/> Public Utilities Commission
<input type="checkbox"/> Caltrans Division of Aeronautics	<input checked="" type="checkbox"/> Regional WQCB #4
<input type="checkbox"/> Caltrans Planning	<input type="checkbox"/> Resources Agency
<input type="checkbox"/> Central Valley Flood Protection Board	<input type="checkbox"/> Resources Recycling and Recovery, Department of
<input type="checkbox"/> Coachella Valley Mtns. Conservancy	<input type="checkbox"/> S.F. Bay Conservation & Development Comm.
<input type="checkbox"/> Coastal Commission	<input type="checkbox"/> San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
<input type="checkbox"/> Colorado River Board	<input type="checkbox"/> San Joaquin River Conservancy
<input type="checkbox"/> Conservation, Department of	<input type="checkbox"/> Santa Monica Mtns. Conservancy
<input type="checkbox"/> Corrections, Department of	<input type="checkbox"/> State Lands Commission
<input type="checkbox"/> Delta Protection Commission	<input type="checkbox"/> SWRCB: Clean Water Grants
<input type="checkbox"/> Education, Department of	<input checked="" type="checkbox"/> SWRCB: Water Quality
<input type="checkbox"/> Energy Commission	<input type="checkbox"/> SWRCB: Water Rights
<input checked="" type="checkbox"/> Fish & Game Region #5	<input type="checkbox"/> Tahoe Regional Planning Agency
<input type="checkbox"/> Food & Agriculture, Department of	<input type="checkbox"/> Toxic Substances Control, Department of
<input type="checkbox"/> Forestry and Fire Protection, Department of	<input type="checkbox"/> Water Resources, Department of
<input type="checkbox"/> General Services, Department of	<input checked="" type="checkbox"/> Other: South Coast Air Quality Management District
<input type="checkbox"/> Health Services, Department of	<input type="checkbox"/> Other:
<input type="checkbox"/> Housing & Community Development	
<input checked="" type="checkbox"/> Native American Heritage Commission	

### Local Public Review Period (to be filled in by lead agency)

Starting Date August 1, 2017

Ending Date August 31, 2017

### Lead Agency (Complete if applicable):

Consulting Firm: Placeworks

Address: 700 S. Flower Street, Suite 600

City/State/Zip: Los Angeles, CA 90017

Contact: Julian Capata

Phone: 213.623.1443

Applicant: Glendale Community Services & Parks Dept.

Address: 613 East Broadway

City/State/Zip: Glendale, CA 91206

Phone: 818.548.2000

Signature of Lead Agency Representative: 

Date: 08-01-2017

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

COMMENT CARD

August 17, 2017 at 6:30 PM – Wilson Middle School Multi-Purpose Project Scoping Meeting

Please let us know your comments/concerns regarding the Wilson MS Multi-Purpose Project EIR

(please print):

I OWN AN APARTMENT AT THE COLONIAL COTTAGES. I BOUGHT MY CONDO 2 YEARS AGO. I ENJOY THE PEACE AND QUIET OF THIS CONDOMINIUM SET UP. MY CONDO IS LOCATED IN THE BACK, CLOSE TO THE ALLEY NEXT TO THE WILSON MIDDLE SCHOOL. I THINK THAT THE PROJECT THAT IS BEING PLANNED WILL BE ONLY A TERRIBLE DISTURBANCE TO THE WHOLE NEIGHBORHOOD!!! THE PARKING IS ALSO A BIG PROBLEM AROUND THIS AREA, AND THE BACK ALLEY ANOTHER EVEN BIGGER PROBLEM!!! AS IT IS WE ALREADY HAVE PROBLEMS WHEN PEOPLE BRINGING CHILDREN TO SCHOOL, DRIVE THROUGH LIKE IF THEY WERE IN A HIGHWAY---- WE SHOULD HAVE SOME BUMPS TO PREVENT THIS PROBLEM.

I, AND MANY OF THE PEOPLE IN THIS AREA, ARE AGAINST THIS STUPID PROJECT!!! TRY TO FIND ANOTHER FIELD WHERE IT HAS NO RESIDENTIAL ISSUES. WE WANT OUR PEACE AND QUIET!

BESIDES, THE PROPERTY VALUES ARE GOING TO DROP!

PLEASE CONSIDER THE PEOPLE LIVING IN THIS AREA!

THANK YOU IN ADVANCE

ZULAY FROMMEL

1206 E. GLENDALE BLVD.

91206 GLENDALE CALIF.

E/MAIL ZULAY.ITU@HOTMAIL.COM

Name:

Address:

Please return this comment card to Peter Vierheilig, Project Manager, City of Glendale, at the end of the Scoping Meeting or fold in half, staple, and mail it to the City of Glendale using the address provided (see reverse).



City of Glendale, Community Services & Parks Department  
Attn: Peter Vierheilig, Project Manager  
613 E. Broadway, Room 120  
Glendale, CA 91206

## Julian Capata

---

**From:** ernestoonofre@gmail.com  
**Sent:** Friday, September 1, 2017 1:56 PM  
**To:** Vierheilig, Peter  
**Cc:** Rodriguez, Carol; Danette Roe  
**Subject:** Turning Wilson Middle School into a Park

The school yard should be available as it was before — available to everybody after school hours.

I lived through that setting and use of this school yard for 30 years without experiencing major incidents with others; there were only one or two minor ones with rude people who used to play baseball.

The planned project would alter the use of the school yard 180 degrees and would affect negatively the neighborhood environment with noise, crowded parking, pollution/littering and fights (?) with other people.  
Yes, there are going to be rude people.

By continuing the use of the school yard as before, we would be letting daylight dictate the time to go home without having to deal with intense lighting until 10 p.m.

And the removal of natural grass would cause a great increase in temperatures, making sleeping and living a nightmare for adjacent neighbors.

Ernesto Onofre, President  
Colonial Cottages HOA  
1208 E. Glenoaks Blvd.  
Glendale , CA 91206

**From:** aldo mascheroni  
**To:** [Vierheilig, Peter](#)  
**Cc:** ["Ross Paulson"; Goglia, Gabrielle](#)  
**Subject:** Wilson Middle School Multi-Purpose Project  
**Date:** Wednesday, August 30, 2017 3:11:47 PM

---

To whom it may concern:

This correspondence is submitted concerning the proposed field improvements for the Wilson Middle School by the Regional Commissioner and Board of Directors of AYSO Region 88 ("AYSO"). **AYSO very much favors the proposal for a new artificial turf field with lights for the Wilson Middle School.**

#### **Overview of AYSO:**

AYSO Region 88 is the primary recreational soccer program for children and their families here in Glendale and La Crescenta. Since the City of Glendale does not run a large-scale year-round soccer program, AYSO fills that important community need. AYSO serves children preschoolers to high school students, from age 3 through 19. AYSO registration is open to all children, regardless of ability. AYSO is able to provide a low-cost, affordable soccer program, primarily due to the fact that no one within AYSO Region 88 receives any compensation whatsoever---AYSO is run entirely by volunteers, including volunteer coaches, volunteer referees, volunteer Board members, and volunteer field personnel.

This year AYSO Region 88 has registered over 3,200 children for the Fall season. There are over 1,000 volunteers within AYSO Region 88 and all volunteers have undergone background checks and specific training for their volunteer work, including mandatory Safe Haven training. AYSO Region 88 has proudly served the children and families of Glendale and La Crescenta for the last 40 years.

#### **Wilson Middle School Field Improvement Project Discussion:**

Generally speaking, the City of Glendale lacks a sufficient number of fields that are suitable for playing soccer, both for children and adults. AYSO Region 88, which serves children, has utilized field permits the City and the Glendale Unified School District ("GUSD" or the "School District") for practices and games at certain fields, including Wilson Middle School ("Wilson MS"). AYSO would like to continue using the Wilson MS field for games on weekends and also for weekday evening practices. Wilson MS is very centrally located for many residents of Glendale and La Crescenta for practices and games for their children.

One of the important reasons that Wilson MS is particularly important to AYSO is that the field is sufficiently large to allow 9 v. 9 games and 11 v. 11 games. The Wilson field is larger than fields at many of the elementary schools. One of the requirements of the game of soccer is that the playing space must be of a certain size, depending upon the age group involved. For example, the minimum field size for youth soccer (11 per team) is 50 yards by 100 yards; high school minimum requirements are 55 yards by 100 yards, and generally such fields exceed these minimum requirements. Thus, the Wilson MS field is particularly suitable for an artificial turf field that could continue to be used for youth soccer games.

#### **Conclusion:**

AYSO has a good record of stewardship for the fields it uses and has been helpful in the development of youngsters in our community. We believe that the proposed field improvements for the Wilson Middle School would be good for the whole community.

Sincerely,

Aldo Mascheroni  
Regional Commissioner  
AYSO Region 88  
[Rc88@ayso88.org](mailto:Rc88@ayso88.org)

To: Peter Vierheilig, Project Mgr., Glendale Comm. Serv. & Parks Dept.

From: Danette Roe ,1208 E. Glenoaks Blvd. , Glendale , CA 91206

Date August 30, 2017 **Modified** on Sept. 1, 2017

## **Comments on Proposal for Wilson MS Multi-Purpose Field**

EIR needs to study the areas listed below and determine negative impact on children and adults using the field, as well as the extensive impact on residential neighbors in close proximity:

1. Increased fine particulate matter in the air as a result of location very near **FWY 2 and Fwy 134**. The children and adults will be outdoors breathing this air as they exercise.\*\*Has this been measured to date??  
As stated in the Initial Report, the construction will add to this as well.
2. Light and noise pollution every day up to 10 pm. This will be unacceptable for neighbors in a zoned residential area.
3. The increase in air temperature of a large artificial turf field as opposed to a grass field. Water savings may be minimal as many turf fields require watering prior to games. For example, LAUSD reversed many school turf projects for this reason, as well as health dangers found in turf components.
4. Lack of parking and small areas for entrance and exit – perhaps only one. Wilson MS principal said all community users would be required to go in/out from the alley side, even if they park in the school lot. This will result in additional foot and car traffic in the alley. This narrow space will not accommodate two-way traffic in higher volumes.
5. Lack of study about alley traffic. The school already has trouble with this now. The study proposes to look at only four street intersections.
6. Added problems with security with open restrooms and mixed age groups from 5-10 pm daily. Are city parks leaving restrooms open all these hours? Open access and use could result in undesirable, unsupervised activity.

Please notify me as soon as the EIR is complete and another community meeting is scheduled. I plan to attend, along with many others in our Homeowners Association.

Thank you for adding these comments to the community input to the EIR for the Wilson MS Multi-purpose Field.



August 30th 2017

Peter Vierheilig  
Project Manager  
City of Glendale Community Services & Parks Dept.  
613 East Broadway Rm 120  
Glendale, CA 91206

**RE: WILSON MIDDLE SCHOOL MULTI-PURPOSE PROJECT**

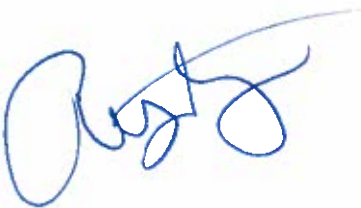
Dear Mr. Vierheilig,

I live on North Adams street, in the direct vicinity of Wilson Middle School. Are you aware of the parking crisis in these neighborhoods? The school offers minimal parking at best, and currently any time there is an activity, parents and whomever take the precious street parking spots that we rely on as residents here. The school sometimes offers the field you are proposing for parking at these events and still all street parking is all taken up by guests. This is also the case during the week, as teachers take these spots during the day and parents crowd the neighborhood to pick up the kids after school.

First off, building a multi-purpose park with no plans for additional parking will put a severe strain on the residents here. There simply are not enough street parking spots. Secondly, the impact of bulldozing and building this close to residents will also severely impact the quality of life through dust contamination, possible fungus or mold spores suddenly becoming airborne with health risk issues, as the ground is torn up. Then the building materials. Rubber jogging tracks outgas profusely, even decades after installation. I personally suffer from reactive airway disorder, which is not unlike asthma at times. The dust conditions here are bad enough. All these factors and more, make this a toxic project.

I understand the developers of this project see a different value in it's potential construction, but I personally would need to relocate after living here 13 years. If I have to relocate, based on the toxic conditions proposed, all the costs associated with such a desperate move would be the responsibility of the Glendale Community Services & Parks, so I would suggest you put that in the budget.

Best regards,



Rusty Whitcroft  
806 North Adams Street  
Glendale, CA 91206

(818)636-6409

Dear Onnig,

Congratulations on another terrific Cruise Night in Glendale and our first CicLAvia. I enjoyed both events.

Thanks to the live streaming of the commission meeting I heard about the success of the One Glendale Program. Congratulations to those who created the program and who figured out a way to pay for it. The data and the survey results are impressive and the kids are having fun, staying busy, and learning good habits too.

It's hard to be against opportunities for kids to play sports, but it's absolutely necessary to limit the hours when the activities are in the heart of a quiet residential neighborhood.

Thursday night I attended the meeting at Wilson MS because I don't want to see noise inserted into their neighborhood until 9 or 10 at night 7 days a week. In their neighborhood daytime noise may be routine, but night time noise should not be there. I know for a fact it is not a pleasant experience. There are people whose young kids are in bed by 9 for school the next day and some adults need to be in bed early because of their work schedule. If there is something that can be developed to prevent noise from going into all those homes, yards, and walkways, it would be great. If that project goes forward, noise mitigation has to be factored in. People need to be able to rest and relax at home indoors and outdoors and no one should have to figure out a way to deal with unwanted sounds day and night.

When we first met and talked about Palmer Park, there was a sycamore tree near me on the south side of the park. On January 23 a tree on the west side of the park came down and the same morning a big heavy limb broke off from high up in that sycamore tree. It took the power lines with it so many houses on my street had no power until after dark. I assume it was due to safety that the city removed that tall sycamore tree soon after that limb came down, but that tree was part of the plan to reduce noise in our neighborhood. Now it's gone and as Koko said at a meeting last winter, the empty space is too close to the fence to plant new trees.

Now that summer is over it is time to enforce the 8 pm closing time for basketball and skateboarding. There's a skateboarder that often brings music in the late afternoon that we can hear clearly from the skate park so we have a variety of noises to deal with during the time the park is open.

Basketball players continue playing after the lights go out (now at 8:05). I've included the photos of the signs that say the courts and skate park close at 8. In daylight they can be read, but after dark the information can't be read easily from a distance. Thus there are people who arrive after dark to use the park who may never notice the signs. The signs fit in with the Glendale's new logo and image, but the information needs to be painted with reflective paint or something that can be read easily after the lights go out.

I'd also like to see a sign that says "Play basketball at night at Pacific Park" and "Verdugo Skate Park is open at night" or something similar so people know they have to play elsewhere after 8 pm.

Tonight I noted park use. There were at least 8 people playing basketball at 8:10 and the skate park was being used too. I heard skating at 8:40. There were basketball players on the court at 8:40 and 9:10. At

9:20 there was still one person pounding the ball on the court. At 9:40 people were still playing basketball.

I appreciated President Kalfayan's question at the commission meeting asking if you have been receiving comments from the neighbors. You and Koko haven't heard from me for several weeks because I've been patiently waiting for school to start in hopes that the activity would cease when the lights go out. Now I know that play continues very late despite school.

Many times it's just one person playing. Often there are quite a few people that persist in playing in the dark. When I'm over at the park when the lights are out, the white backboard is still visible. It's really irritating that activity often begins at 7 am and continues all day and night seven days a week despite the school schedule and despite the lights being out.

Thanks for looking into the possibility of new signage so the hours are clear and people know what options they have. Do the police ever make a friendly trip through the park at 8 or 9 pm?

Thanks so much for your help on this. My new neighbors said they can hear the basketballs every time they step out of their home too. Sometimes I can hear it when I'm in my study even with the TV on. The basketball and skateboards can be heard easily from the sidewalk in front of my home so there's no relief outdoors anywhere at my house.

Have you seen Steph Curry's ad for Infiniti? It confirms that dribbling a basketball is a noisy activity just as the powerful car is noisy. The basketball and the car definitely get one's attention.

Thanks for your help.

Sincerely,

Kay Hostetler

Judith A. Smith  
508 N. Sunset Canyon Drive  
Burbank, CA 91206  
Email: jalesniak@hotmail.com

August 20, 2017

City of Glendale Community Services and Parks Department  
613 E. Broadway, Room 120  
Glendale, CA 91206

Re: Wilson Middle School Multi-Purpose Field Project

Gentlemen:

As a property owner at 806 N. Adams Street, I attended the meeting on August 17, 2017. I would like to summarize the comments I made at the meeting in opposition to the referenced project.

- The neighborhood does not have sufficient street parking as it is now and with approval of this project, it will create a monster problem for the residents who live there.
- This is a residential neighborhood and the residents value peace and quiet. Bringing a soccer field and park into the neighborhood will create noise until 10:00 pm and beyond. This is totally unacceptable.
- The light pollution created by having six 60' lights will be offensive to the neighborhood.
- The property values will decrease as a result of this project.
- The neighborhood will not be as safe since gangs often congregate at such places after hours.

I strongly oppose this project and ask that you seriously consider dropping this idea and leaving the sports facilities as they currently remain throughout the city.

Sincerely,

  
Judith Smith

## **Vierheilig, Peter**

---

**From:** Carole Weling <weling6659@gmail.com>  
**Sent:** Thursday, August 17, 2017 5:41 PM  
**To:** Ochoa, Scott; Garcia, Michael; Kassakhian, Ardashes; Najarian, Ara; Sinanyan, Zareh; Gharpetian, Vartan; Devine, Paula; Bulanikian, Onnig; Vierheilig, Peter; Grant, Michael  
**Subject:** FIVE HUNDRED EIGHTY THREE ACRES OF ---- OPEN SPACE

I have been working all day to secure information regarding the designated "open spaces" the city has purchased through the years for park development.

I am getting "half or no information" about the total of 583 acres that the city has purchased for parks and open space.

The city and the school district is now attempting to CRAM DOWN THE THROATS of the property owners that are around WILSON MIDDLE SCHOOL -- A PROPERTY THAT IS DESIGNATED --- R1 --- TO BECOME A 365 DAYS A YEAR BUSINESS WITH ALL THE TRAPPINGS.

The attempt to circumvent our zoning laws will open the flood gates for others. R1 IS R1. Residential --- making a business for some will create--- NOISE, TRASH, POLICE PRESENCE, LIGHTING ISSUES, TRAFFIC -  
VERDUGO ROAD IS CURRENTLY A SPEEDWAY- INSURANCE COVERAGE ISSUES, HOURS OF USE ISSUES, INGRESS AND EGRESS ISSUES----JUST TO NAME A FEW OF THE PROBLEMS.

I HOPE THAT THE CITY WILL LISTEN AND MOVE THIS PROJECT TO A BETTER LOCATION SUCH AS SOME OF THE PROPERTY THEY CITY HAS PURCHASED FOR PARKS, OR BRAND PARK THAT ALREADY HAS MOST OF THE NEEDED FACILITY FOR THIS ACTIVITY.

I am also concerned how the city intends to compensate property owners affected by this proposal for lost property values. I am currently securing all the information necessary on each entity --

The City of Glendale (which is under insured), the school district, the company for the EIR which will render the usual  
no significant impact (Placeworks, Inc.) and the AYSO just to name a few. Must provide their insurance so these entities my be given NOTICE.

The reality of this proposal--- to be voted on by the city council--- has not one member that will be effected by this negative proposal. Even the Principal at Wilson packs his bags and go home to another ---- city. What does anyone care that will not be effected. This principal is so uninformed that he thinks the ingress and egress at the alley is a good idea.

REMEMBER --- VERDUGO AND LA CANADA--no plaques and roses for the dead.

Carole Weling (COPY TO CALHAHAN AND BLAINE --- FIFTY MILLION AGAINST THE CITY OF DANA POINT  
A CITY THAT WOULD NOT LISTEN.

GLENDALE HAS ONE OF THE WORST DRIVING RECORDS IN THE---COUNTRY---RANKING NUMBER 5.

NOW THE CITY IS PROPOSING CHILDREN RUNNING ACROSS VERDUGO RD TO ACCESS THE FIELD.

COMMENT CARD

August 17, 2017 at 6:30 PM – Wilson Middle School Multi-Purpose Project Scoping Meeting

Please let us know your comments/concerns regarding the Wilson MS Multi-Purpose Project EIR

(please print):

My concern is that noise and lights seven days a week will be installed into a quiet peaceful neighborhood. People are used to having activities at Wilson MS, but the activities end when daylight ends.

What noise barrier will reduce the sound of the activities that will carry into the neighborhood?

If one lives next to a high school football stadium, lights and noise will be present one or two nights a week for a few weeks during football season. By contrast the city and the school district are expecting Wilson MS neighbors to endure noise and lighting 7 nights a week every week until 10pm. There is no comparison.

There must be other locations in Glendale or in Glendale parks where a multipurpose field could be created that would have parking for participants and their fans with no homes and apartments nearby.

If you can develop an idea for something to absorb the sound, that would be great. Maybe there is something that could be installed to satisfy needs for recreation and for quiet spaces. Nearby neighbors need their space at home as a place to retreat and refresh their energy.

Name: Kay Hostetler  
Address: 1263 Oakridge Dr. Glendale, CA 91205

Please return this comment card to Peter Vierheilig, Project Manager, City of Glendale, at the end of the Scoping Meeting or fold in half, staple, and mail it to the City of Glendale using the address provided (see reverse).



Kay V. Hostetler  
1263 Oakridge Dr.  
Glendale, CA 91205

Place  
Stamp  
Here

City of Glendale, Community Services & Parks Department  
Attn: Peter Vierheilig, Project Manager  
613 E. Broadway, Room 120  
Glendale, CA 91206



COMMENT CARD

August 17, 2017 at 6:30 PM – Wilson Middle School Multi-Purpose Project Scoping Meeting

Please let us know your comments/concerns regarding the Wilson MS Multi-Purpose Project EIR

(please print):

1. EXAM CURRENT, HIGHLY CONGESTED PARKING NOT JUST IN IMMEDIATE SURROUNDINGS BUT INTO NEARBY RESIDENTIAL AREAS
2. LIGHTS - MINIMIZE IMPACT OF LIGHTING NOT JUST IN SURROUNDING COMMUNITY; LOOK AT IMPACT OF LIGHT POLLUTION ON NIGHT SKY - CHECK INTERNATIONAL DARK-SKY ASSN.
3. LIMIT WEEKNIGHTS TO 9 PM - FRIDAY, SAT. SUN. CONSIDER 10 PM
4. POLICE & SECURITY - MUST HAVE FOR COMFORT OF NEIGHBORS, SITE IS VERY CLOSE TO FREEWAYS & HOMELESS ENCAMPMENT ON WILSON. MUST HAVE SECURITY ON SITE AT ALL TIMES WHEN OPEN FOR PUBLIC USE - ESPECIALLY RESTROOMS

THIS COULD BE VERY BENEFICIAL FOR AREA CHILDREN & SPORTS PROGRAMS AS WELL AS ADULTS IN AREA IF ABOVE ISSUES ARE CAREFULLY CONSIDERED AND SOLUTIONS PROPOSED.

Name: ORALIA VAN LEUVEN

Address: 904 VERDUGO CIRCLE DR

Please return this comment card to Peter Vierheilig, Project Manager, City of Glendale, at the end of the Scoping Meeting or fold in half, staple, and mail it to the City of Glendale using the address provided (see reverse).



Ms. Oralia Van Leuven  
904 Verdugo Circle Dr.  
Glendale, CA 91206-1534

SANTA CLAYTONA CA 913

22 AUG 2007 PM 10



City of Glendale, Community Services & Parks Department  
Attn: Peter Vierheilg, Project Manager  
613 E. Broadway, Room 120  
Glendale, CA 91206



## Vierheilig, Peter

---

**From:** Paul Manchester <wilwhimsey@sbcglobal.net>  
**Sent:** Thursday, August 17, 2017 11:57 AM  
**To:** Vierheilig, Peter  
**Subject:** Wilson Middle School Multi-Purpose Project

Peter Vierheilig, Project Manager  
City of Glendale Community Services & Parks Department.  
Phone Number 818.548.2000  
[PVierheilig@Glendaleca.gov](mailto:PVierheilig@Glendaleca.gov)  
City of Glendale Community Services & Parks Department  
613 East Broadway Rm 120  
Glendale, California 9120  
Wilson Middle School Multi-Purpose Project

Dear Mr. Vierheilig,

I live two buildings north of Wilson Middle School on Verdugo Road. I can see how developing outside usage of the playing fields at the middle school can seem very attractive and a good use of existing facilities, but I am concerned about the impact these events will have on parking in the neighborhood.

During the school year, when there are school events like soccer games and the like, street parking is extremely difficult for the neighborhood. I have one parking space for my unit. If I wish to have someone over for dinner or lunch when an event is on, my guests end up parking blocks away from my home. My neighbor Sabrina and her husband have two cars and one space. When an event happens at the school they end up parking blocks away from their home.

At the moment though, this frustration is mitigated by the knowledge that it is only during school events. So we plan our lives around school events. During soccer season I do not plan on people coming to my home when games are happening. One neighbor suggested that I bookmark the middle school web calendar to help plan events at my home. At the moment we have the respite of evenings and weekends when school is not in session - which is when we need the street parking the most. It sort of works out at the moment. We are patient with the school events as they are not all the time.

We are concerned that if the playing field's evenings and weekends are scheduled with outside events, we will no longer have sufficient parking and our quality of life will be impacted. The people pushing this plan obviously do not live close to the school. For this plan to move forward there needs to be a plan for parking that does not depend on street parking in the neighborhood. Perhaps, shuttles for event goers and permit parking for the neighborhood?

I can be at the meeting tonight at Wilson Middle School at 630, but I have guests arriving at 715, so I will probably leave about 7. I assume the beginning of the event will be more about presentation than input, so I am putting my concerns in an email.

If you have any questions or thoughts, I would be happy to hear them or be useful in discovering solutions that work.

Best of wishes- I know it is difficult balancing many wishes. But the parking in the neighborhood is a big deal and will greatly impact quality of life in the neighborhood.

Sincerely,

Paul Manchester  
815 North Verdugo Road  
Glendale, CA 91206  
323 656-8498  
[wilwhimsey@sbcglobal.net](mailto:wilwhimsey@sbcglobal.net)  
*Paul Manchester*

[http://fugitivecolors.com/PaulManchester\\_illustration.pdf](http://fugitivecolors.com/PaulManchester_illustration.pdf)

COMMENT CARD

August 17, 2017 at 6:30 PM – Wilson Middle School Multi-Purpose Project Scoping Meeting

Please let us know your comments/concerns regarding the Wilson MS Multi-Purpose Project EIR

(please print):

Parking and noise already a big problem.  
(Vendigo Rd & Freeway)

Name:

Address:

Please return this comment card to Peter Vierheilig, Project Manager, City of Glendale, at the end of the Scoping Meeting or fold in half, staple, and mail it to the City of Glendale using the address provided (see reverse).

536 Grove St  
Men Ca 91206



City of Glendale, Community Services & Parks Department  
Attn: Peter Vierheilig, Project Manager  
613 E. Broadway, Room 120  
Glendale, CA 91206

COMMENT CARD

August 17, 2017 at 6:30 PM – Wilson Middle School Multi-Purpose Project Scoping Meeting

Please let us know your comments/concerns regarding the Wilson MS Multi-Purpose Project EIR  
(please print):

Noise - M → F till 10 PM seriously!

Why not put turf at soccer fields  
near LA Zoo - they are often not used.

Name:

Address:

Please return this comment card to Peter Vierheilig, Project Manager, City of Glendale, at the end of the Scoping Meeting or fold in half, staple, and mail it to the City of Glendale using the address provided (see reverse).

**From:** S B  
**To:** [Vierheilig, Peter](#)  
**Subject:** Wilson Middle School Multi-Purpose Project  
**Date:** Saturday, August 05, 2017 12:48:42 PM

---

Hello Peter,

Thank you for the information via mail for the proposed multi-purpose project at Wilson middle School.

As nearby residents to the school, we do have specific concerns about the proposal.

First, parking. It states that no means for additional parking are being considered. This is a great mistake. Given the scope of community interest in such a facility, the parking needs will definitely spill over to the already overcrowded street parking. Our street has parking available on one side only, and every time the school has an event, participants park illegally, block driveways, and take away the already limited parking for the residents on Woodbury Road.

This can be remedied in a few ways:

1. Have the school open up their parking and / or the soccer field to allow for parking on the site.
2. Have the current plans which neglect to create additional parking, modified to include additional and adequate parking for the projected use of the site.
3. Have the residents on affected nearby streets with already reduced parking availability, given signs indicting the area is a sepcial permit zone with residents given the permits at no additonal cost for being home owners in the area. (Though people will undoubtedly ignore such permitted areas and park anyway, the zone would mitigate some of the problem and the increased revenue from parking fines could offset necessary patrols for crime prevention).

Additionally, the positive correlation of increased crime and night time activities, especially tied to sporting events, is well chronicalled in peer-reviewed scientific literature. For example, a 2012 study by Bellis et. al., found the need to predict such crime and in turn plan for the increased budgetary costs associated with policing the area and responding to crimes critical to off-setting the increased liklihood of night-time crime with gatherings. Among other areas of concern, the study finds that "nights preceding work-free days see more than double levels of assaults presentations". Further, "criminal justice systems work to contain a culture where celebrations, sports events, and holidays lead to greater violence." (<https://bmcpublichealth.biomedcentral.com/articles/10.1186/1471-2458-12-746>)

This is a very serious concern for the safety and well being of all residents in the city of Glendale. Tax paying residents who purchased homes in quiet streets deserve the continued quiet and safety these investments provide. Changing the area to include community attractions which negatively impact parking and increase police patrols and response from statisitcally likely increase of crime is not suporting those residents.

A study by Foster et. al., finds, "crime might be a necessary and acceptable trade-off for living in a (potentially) more vibrant, liveable walkable community." The study cited the perception of safety in areas where crime is actually increased due to urbanisation design of park faciitiies. Specifically, home within 400 meters were most significantly affected. (<https://doi.org/10.1016/j.socscimed.2015.04.013>)

Finally, the area is home to many indigenous Oak and Sycamore trees. The addition of community members smoking not only impact the quality of air for the residents but these protected trees. Light and noise pollution for the nearby residents is another valid concern for quality of life.

We disapprove the proposed Wilson Middle School Multi-Purpose Project.

Shawn Bush  
Joe Castro  
625 Woodbury Road  
Glendale, CA

[818.395.2192](tel:818.395.2192)





TO: Peter Vierheilig, Project Manager

October 10, 2017

RE: Wilson Middle School Multi-Purpose Field

I live on Galer place, a small cul-de-sac directly across from the entrance to Wilson Middle School. My home was built in the late 1920's, when Galer Place was a full-sized street as the 134 Freeway was not yet built. In fact, Wilson was not built then either.

My neighborhood has gone through a lot. My street and several other streets nearby were torn in two by the freeway. I live with constant freeway noise. And living so close to Wilson has its problems as well: traffic congestion twice per day and sometimes three times when there is a school event. I have seen more than 25 cars waiting on my little cul-de-sac street for school to get out, blocking all residents' driveways. After I moved here (25 years ago), I had to remember to avoid leaving or arriving home at certain times since access to my property would be impossible.

My point here is: It's not fair to abuse the people who live here. It's not right to make our lives even worse by putting bright lights at Wilson so additional persons can play soccer (or whatever) 7 nights a week until 10:00 PM! And frankly, I don't appreciate that this project will undoubtedly reduce my property value. I'll bet no one making this proposal lives in this immediate area. You don't want it in your backyard? Neither do I.

Glendale already has a very nice Sports Complex and the Scholl Canyon Athletic Fields. There are numerous parks in Glendale with basketball courts and the following parks include ballfields: Verdugo Park, Pelanconi Park, Montrose Park, Glorietta Park and Dunsmore Park.

The traffic on Monterey and Verdugo is already bad – parking is always at a premium. Where are the participants going to park? I'll tell you where: my tiny street, Monterey Road, Verdugo and Adams; the same streets that are already burdened with traffic and congestion from Wilson Middle School.

Monterey and Verdugo are also frequently used by various emergency vehicles. It would seem illogical to have extra vehicles and people searching for parking, getting in/out of parking spaces until after 10:00 PM, seven days a week when emergency vehicles need to have easy access.

Since this is directed at GUSD, why don't you propose to utilize Glendale High that already has parking and the big lights? What about the College? How often are those fields used at night outside of football season? Please don't make these changes to Wilson. My own opinion: we have enough sports opportunities in Glendale. Why not more art, dance, music, and theatre venues/opportunities?

Sincerely,



Kathleen Henderson



Peter Verheilig

Project Manager

City of Glendale Community Serv & Parks Dept  
613 East Broadway Room 120  
Glendale CA 91206

SMITH CLARKSON, CA 912  
10 OCT 2007 PM 8 L



91206-430845



## Appendices

### **Appendix B      Lighting Study**

## Appendices

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# Wilson Middle School

Glendale, CA

## Lighting System

Pole / Fixture Summary						
Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit
P1-P3	70'	15'	2	TLC-BT-575	1.15 kW	A
		70'	5	TLC-LED-1150	5.75 kW	A
P4-P6	70'	20'	2	TLC-BT-575	1.15 kW	A
		70'	5	TLC-LED-1150	5.75 kW	A
6			42		41.40 kW	

Circuit Summary			
Circuit	Description	Load	Fixture Qty
A	Multipurpose	41.4 kW	42

Fixture Type Summary							
Type	Source	Wattage	Lumens	L90	L80	L70	Quantity
TLC-LED-1150	LED 5700K - 75 CRI	1150W	121,000	>63,500	>63,500	>63,500	30
TLC-BT-575	LED 5700K - 75 CRI	575W	52,000	>63,500	>63,500	>63,500	12

## Light Level Summary

Calculation Grid Summary								
Grid Name	Calculation Metric	Illumination					Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		
Multipurpose	Horizontal Illuminance	30.7	24	39	1.65	1.28	A	42
Spill	Horizontal	0.29	0	4.91	0.00		A	42
Spill	Max Candela (by Fixture)	2344	0	15825	0.00		A	42
Spill	Max Vertical Illuminance Metric	0.32	0	4.98	0.00		A	42

## From Hometown to Professional



**We Make It Happen®**

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# EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
3	P1-P3	70'	-	15'	TLC-BT-575	2	2	0
				70'	TLC-LED-1150	5	5	0
3	P4-P6	70'	-	20'	TLC-BT-575	2	2	0
				70'	TLC-LED-1150	5	5	0
6	TOTALS					42	42	0



## Wilson Middle School

Glendale, CA

### GRID SUMMARY

**Name:** Multipurpose  
**Size:** 492' x 180'  
**Spacing:** 30.0' x 30.0'  
**Height:** 3.0' above grade

### ILLUMINATION SUMMARY

#### MAINTAINED HORIZONTAL FOOTCANDLES

Entire Grid  
**Guaranteed Average:** 30  
 Scan Average: 30.69  
 Maximum: 39  
 Minimum: 24  
 Avg / Min: 1.30  
**Guaranteed Max / Min:** 3  
 Max / Min: 1.65  
 UG (adjacent pts): 1.45  
 CU: 0.67  
 No. of Points: 102

#### LUMINAIRE INFORMATION

**Color / CRI:** 5700K - 75 CRI  
**Luminaire Output:** 121,000 / 52,000 lumens  
**No. of Luminaires:** 42  
**Total Load:** 41.4 kW

#### Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1150	>63,500	>63,500	>63,500
TLC-BT-575	>63,500	>63,500	>63,500

Reported per TM-21-11. See luminaire datasheet for details.

**Guaranteed Performance:** The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

**Field Measurements:** Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

**Electrical System Requirements:** Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

**Installation Requirements:** Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



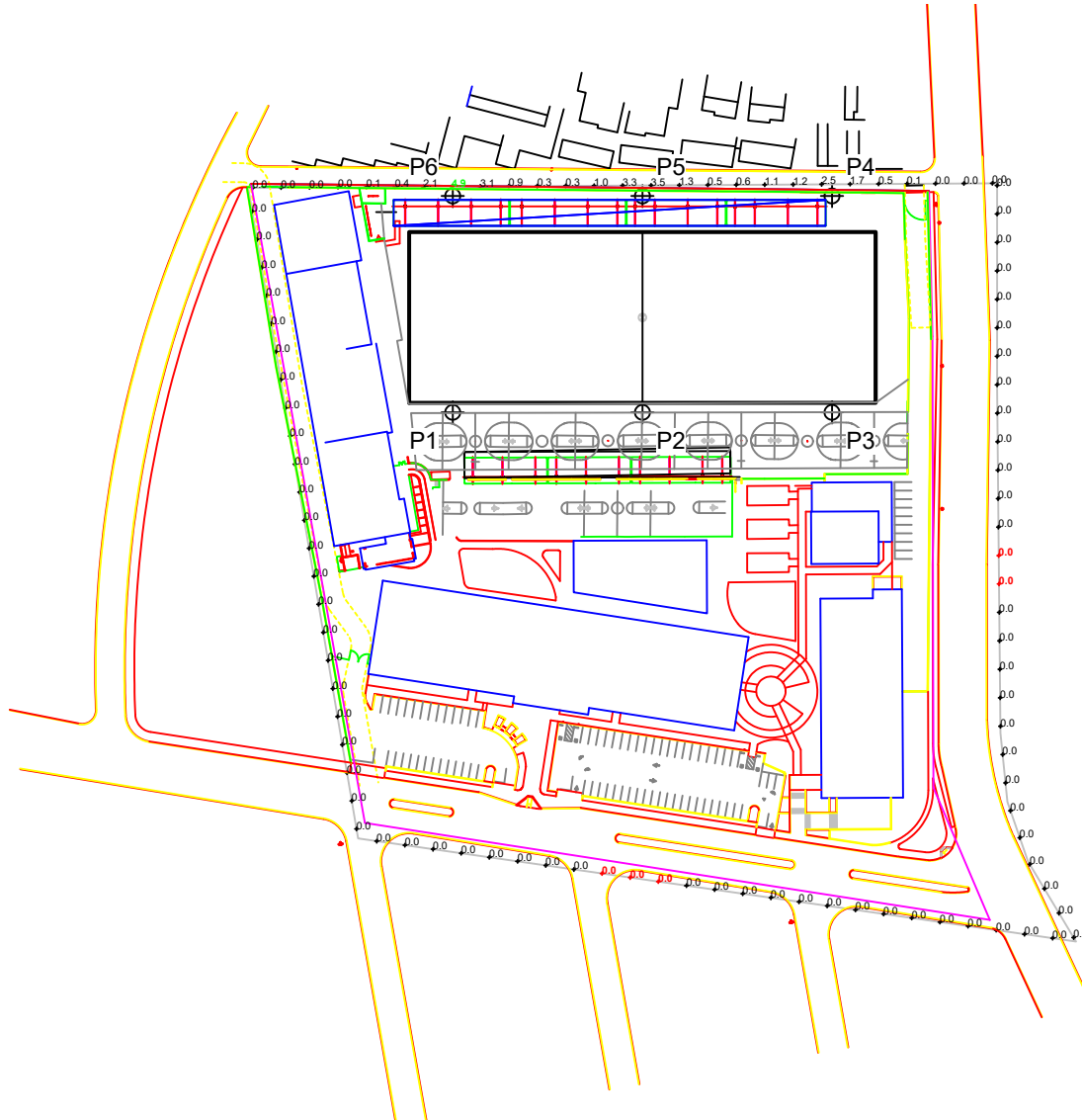
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## ILLUMINATION SUMMARY

# EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
3	P1-P3	70'	-	15'	TLC-BT-575	2	2	0
				70'	TLC-LED-1150	5	5	0
3	P4-P6	70'	-	20'	TLC-BT-575	2	2	0
				70'	TLC-LED-1150	5	5	0
6	TOTALS					42	42	0



SCALE IN FEET 1 : 200



Pole location(s) ⦿ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: Daniel Lohman • File #186740c • 01-Jun-18

## Wilson Middle School

Glendale,CA

### GRID SUMMARY

Name: Spill  
Spacing: 30.0'  
Height: 3.0' above grade

### ILLUMINATION SUMMARY

#### MAINTAINED HORIZONTAL FOOTCANDLES

Entire Grid  
Scan Average: 0.2856  
Maximum: 4.91  
Minimum: 0.00  
No. of Points: 103

#### LUMINAIRE INFORMATION

Color / CRI: 5700K - 75 CRI  
Luminaire Output: 121,000 / 52,000 lumens  
No. of Luminaires: 42  
Total Load: 41.4 kW

#### Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1150	>63,500	>63,500	>63,500
TLC-BT-575	>63,500	>63,500	>63,500

Reported per TM-21-11. See luminaire datasheet for details.

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**Installation Requirements:** Results assume  $\pm$  3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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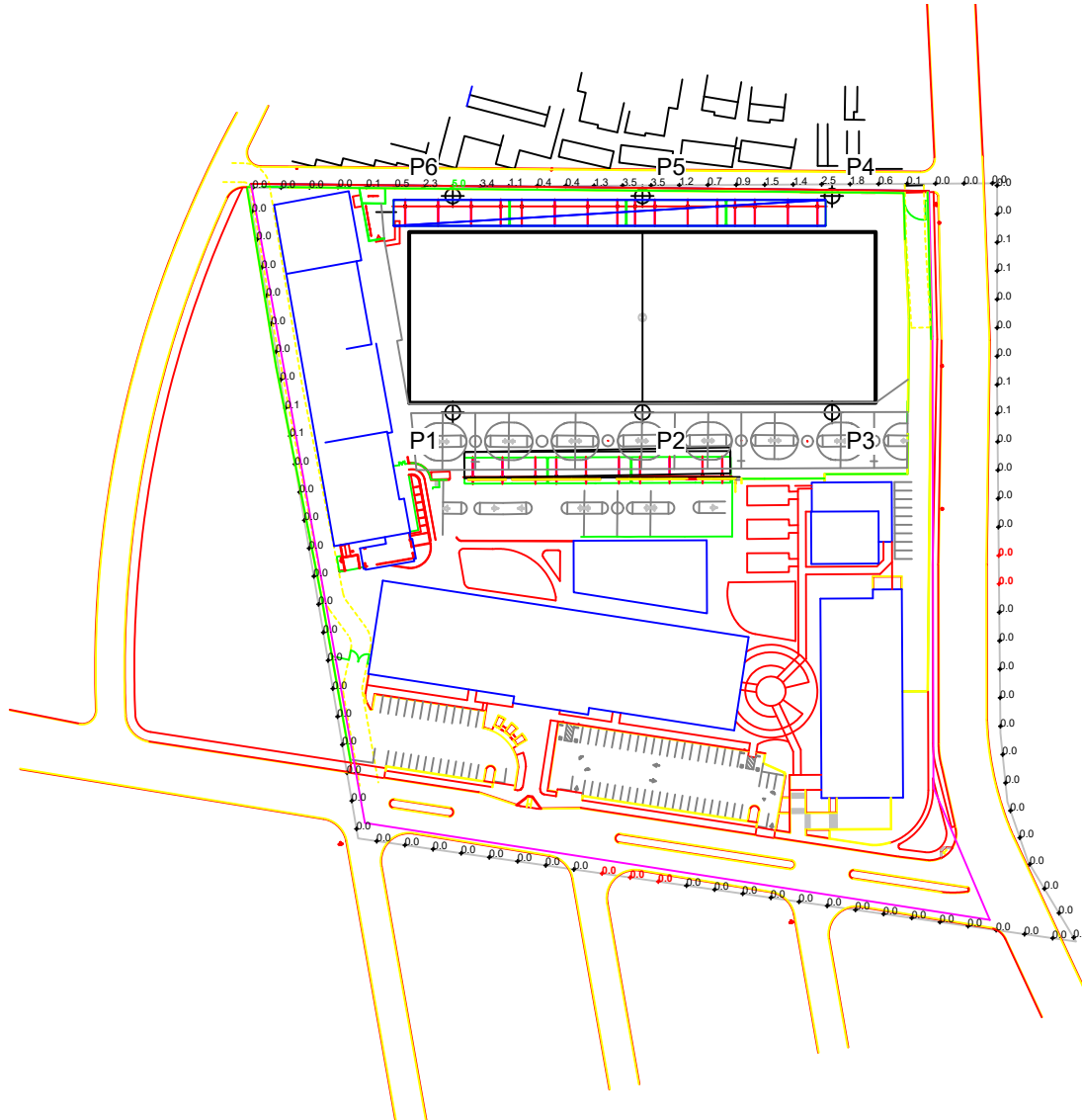
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## ILLUMINATION SUMMARY



# EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
3	P1-P3	70'	-	15'	TLC-BT-575	2	2	0
				70'	TLC-LED-1150	5	5	0
3	P4-P6	70'	-	20'	TLC-BT-575	2	2	0
				70'	TLC-LED-1150	5	5	0
6	TOTALS					42	42	0



SCALE IN FEET 1 : 200



Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: Daniel Lohman • File #186740c • 01-Jun-18

## Wilson Middle School

Glendale,CA

### GRID SUMMARY

Name: Spill  
Spacing: 30.0'  
Height: 3.0' above grade

### ILLUMINATION SUMMARY

MAINTAINED MAX VERTICAL FOOTCANDLES

Entire Grid  
Scan Average: 0.3217  
Maximum: 4.98  
Minimum: 0.00  
No. of Points: 103

LUMINAIRE INFORMATION

Color / CRI: 5700K - 75 CRI  
Luminaire Output: 121,000 / 52,000 lumens  
No. of Luminaires: 42  
Total Load: 41.4 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1150	>63,500	>63,500	>63,500
TLC-BT-575	>63,500	>63,500	>63,500

Reported per TM-21-11. See luminaire datasheet for details.

**Guaranteed Performance:** The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

**Field Measurements:** Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

**Electrical System Requirements:** Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

**Installation Requirements:** Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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### ILLUMINATION SUMMARY

# EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
3	P1-P3	70'	-	15'	TLC-BT-575	2	2	0
				70'	TLC-LED-1150	5	5	0
3	P4-P6	70'	-	20'	TLC-BT-575	2	2	0
				70'	TLC-LED-1150	5	5	0
6	TOTALS					42	42	0

## Wilson Middle School

Glendale,CA

### GRID SUMMARY

**Name:** Spill  
**Spacing:** 30.0'  
**Height:** 3.0' above grade

### ILLUMINATION SUMMARY

MAINTAINED CANDELA (PER FIXTURE)

**Scan Average:** 2344.2686  
**Maximum:** 15825.33  
**Minimum:** 0.00  
**No. of Points:** 103

LUMINAIRE INFORMATION

**Color / CRI:** 5700K - 75 CRI  
**Luminaire Output:** 121,000 / 52,000 lumens  
**No. of Luminaires:** 42  
**Total Load:** 41.4 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1150	>63,500	>63,500	>63,500
TLC-BT-575	>63,500	>63,500	>63,500

Reported per TM-21-11. See luminaire datasheet for details.

**Guaranteed Performance:** The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

**Field Measurements:** Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

**Electrical System Requirements:** Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

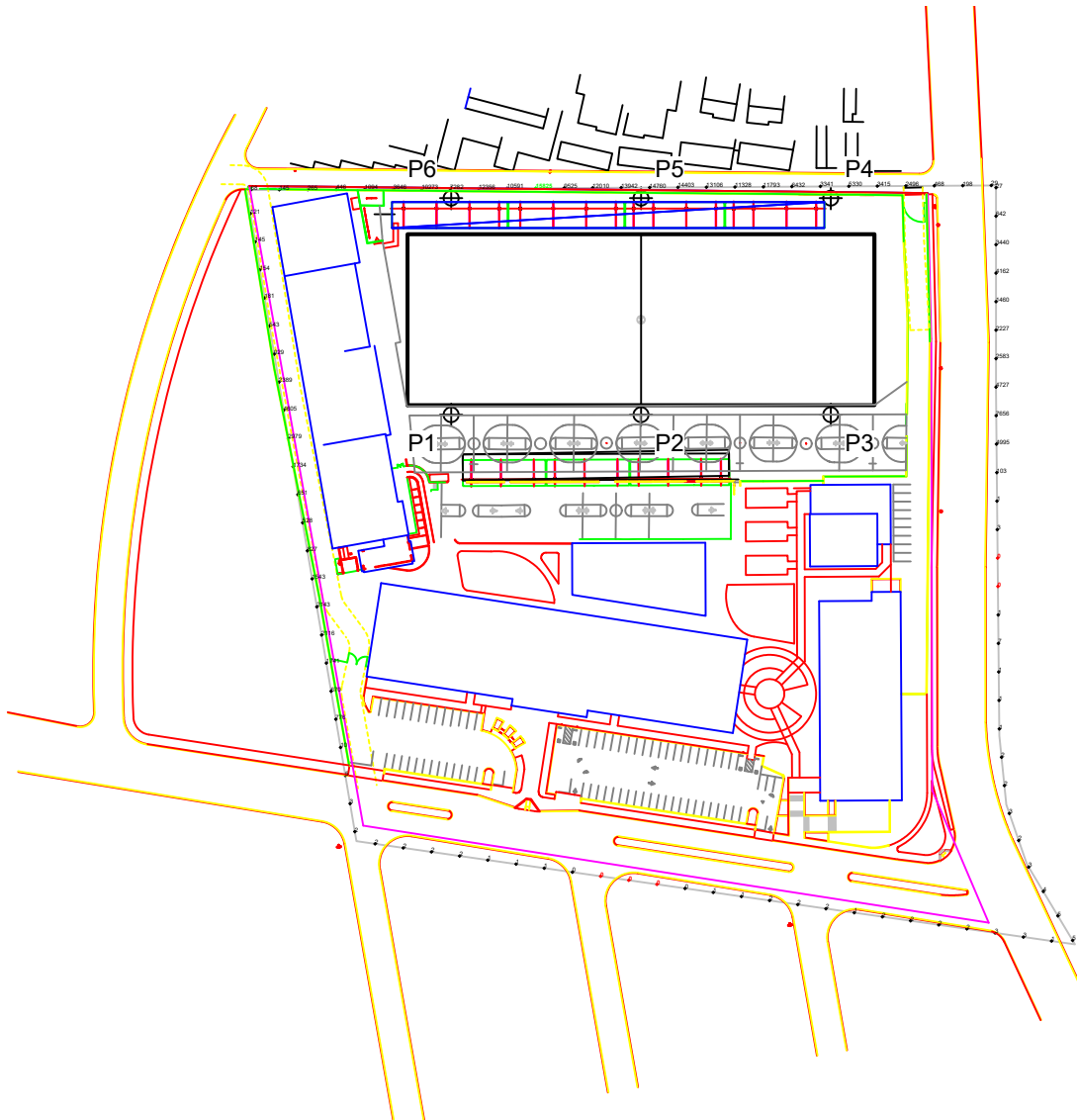
**Installation Requirements:** Results assume  $\pm$  3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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### ILLUMINATION SUMMARY



SCALE IN FEET 1 : 200



Pole location(s)  $\oplus$  dimensions are relative to 0,0 reference point(s)  $\otimes$

Wilson Middle School

Glendale,CA

EQUIPMENT LAYOUT

**INCLUDES:**

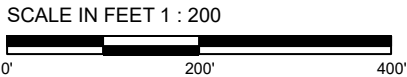
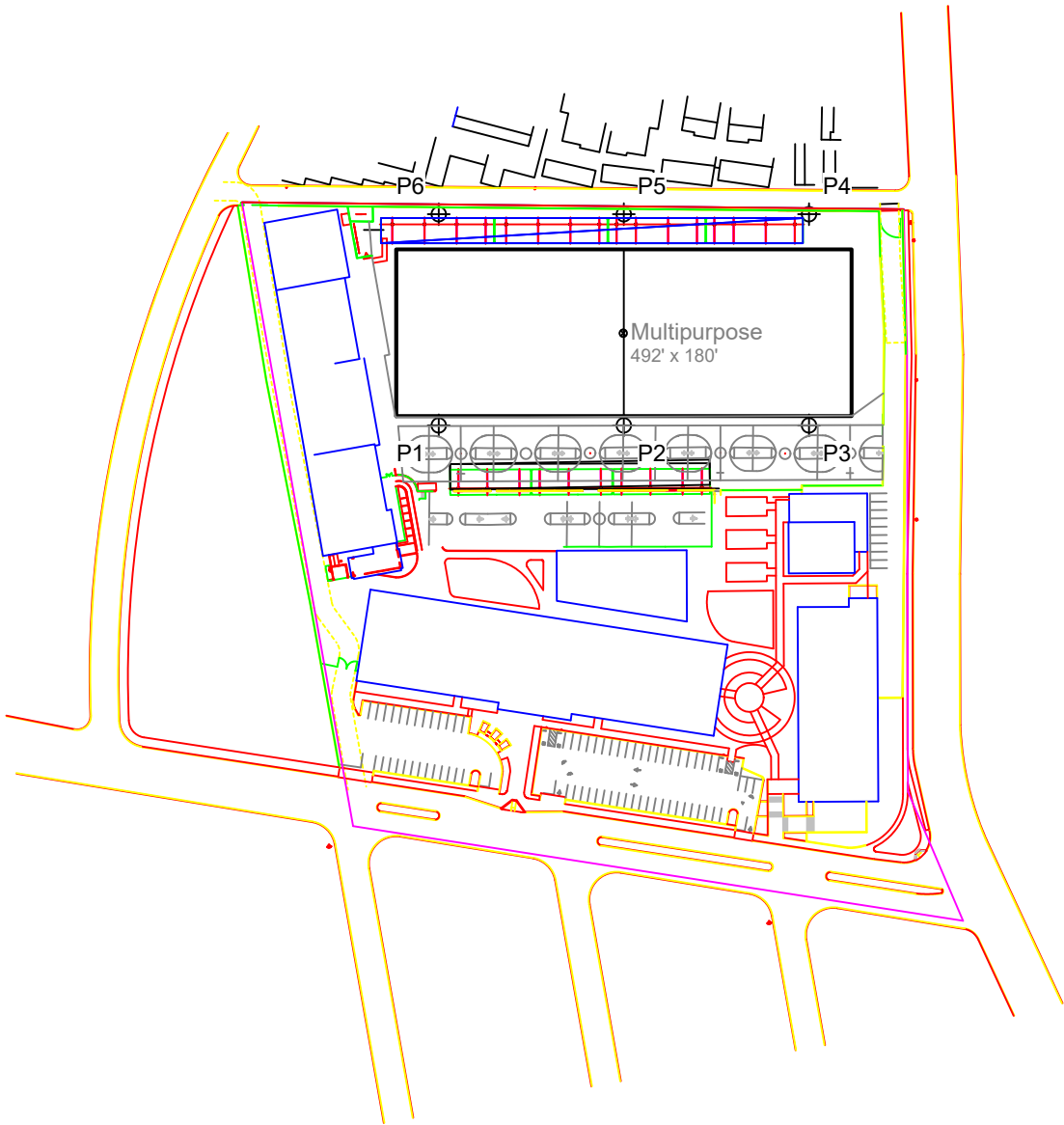
- Multipurpose

**Electrical System Requirements:** Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

**Installation Requirements:** Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN						
Pole				Luminaires		
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE
3	P1-P3	70'	-	15'	TLC-BT-575	2
				70'	TLC-LED-1150	5
3	P4-P6	70'	-	20'	TLC-BT-575	2
				70'	TLC-LED-1150	5
6	TOTALS					42

SINGLE LUMINAIRE AMPERAGE DRAW CHART							
Ballast Specifications (.90 min power factor)		Line Amperage Per Luminaire (max draw)					
Single Phase Voltage		208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	480 (60)
TLC-LED-1150		6.8	6.5	5.9	5.1	4.1	3.7
TLC-BT-575		3.2	3.0	2.8	2.4	1.9	1.7



Pole location(s) ⦿ dimensions are relative to 0,0 reference point(s) ⊗



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## Wilson Middle School

Glendale, CA

### GLARE IMPACT

#### Summary

Map indicates the maximum candela an observer would see when facing the brightest light source from any direction.

A well-designed lighting system controls light to provide maximum useful on-field illumination with minimal destructive off-site glare.

### GLARE

#### Candela Levels

**High Glare: 150,000 or more candela**

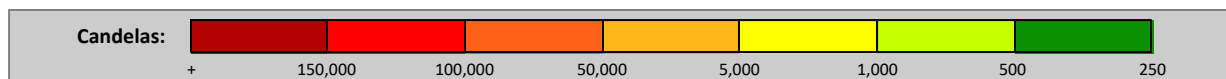
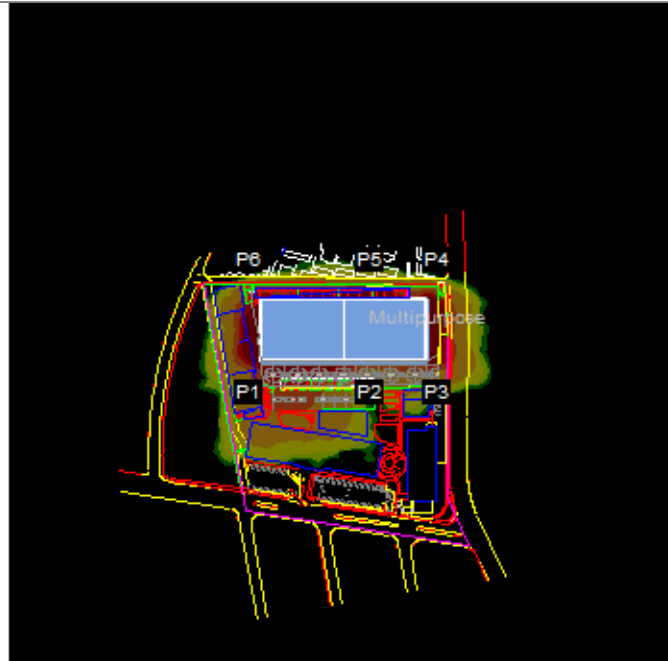
Should only occur on or very near the lit area where the light source is in direct view. Care must be taken to minimize high glare zones.

**Significant Glare: 25,000 to 75,000 candela**

Equivalent to high beam headlights of a car.

**Minimal to No Glare: 500 or less candela**

Equivalent to 100W incandescent light bulb.



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## Appendices

### **Appendix C      AQGHG Modeling Data**

## Appendices

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## CalEEMod Project Characteristics Inputs

**Project Address:** 1221 Monterey Road, Glendale  
**Project Location:** Los Angeles-- South Coast 91206  
**Climate Zone:** 12  
**Land Use Setting:** Urban  
**Operational Year:** 2018  
**Utility Company:** Southern California Edison  
**Air Basin:** South Coast Air Basin  
**Air District:** SCAQMD  
**SRA:** 7

Total Project Site Acreage: 9.93 acres  
 Acreage to be disturbed: 3.85 acres

<b>Components*</b>	<b>SQFT</b>	<b>Acres</b>
Storage Building**	1,645	0.04
Basketball Courts	42,145	0.97
New Athletic Fields	100,000	2.30
Remaining Field and Landscaping	23,916	0.55
<b>Total:</b>		<b>3.85</b>

\*Square footage based on aerial photograph of site

\*\* The Storage Building/Restrooms would be hauled onto the site rather than constructed.

## CalEEMod Land Use Inputs

<b>Land Use</b>	<b>Land Use Type</b>	<b>Land Use Subtype</b>	<b>Unit Amount</b>	<b>Size Metric</b>	<b>Lot Acreage</b>	<b>Square Feet</b>
Non-Parking Asphalt	Parking	Other Asphalt Surfaces	42.15	1000 sqft	1.01	42,145
Landscape, Turf	Parking	Other Non-Asphalt Surfaces	123.92	1000sqft	2.84	
					<b>3.85</b>	acre

## Soil Hauling

<b>Construction Activity</b>	<b>Export Volume (CY)</b>	<b>Haul Truck Capacity (CY)*</b>	<b>Total Trip Ends</b>	<b>Total Days</b>	<b>Trip Ends/Day</b>
Rough Grading	13,381	16	1,673	16	105

\*CalEEMod Default

## Asphalt Haul

<b>Construction Activity</b>	<b>Demolition Volume (ton)</b>	<b>Haul Truck Capacity (ton)*</b>	<b>Haul Distance (miles)*</b>	<b>Total Trip Ends</b>	<b>Total Days</b>	<b>Trip Ends/Day</b>
Asphalt Demo Debris Haul	316	20	20	32	20	2

\*CalEEMod Default

## Portable Haul

<b>Construction Activity</b>	<b>Number of Prefabricated Buildings</b>	<b>Trips per Building</b>	<b>Total Haul Trips</b>
Portable Haul	2	2	4

Architectural Coating

Non-Residential Architectural Coating		
Percentage of Buildings' Interior Painted:	100%	
Percentage of Buildings' Exterior Painted:	100%	
SCAQMD Rule 1113		
Interior Paint VOC content:	50	grams per liter
Exterior Paint VOC content:	50	grams per liter

Nonresidential Structures	Land Use Square Feet	SCAQMD Factor	Total Paintable Surface Area <sup>2</sup>	Paintable Interior Area <sup>1</sup>	Paintable Exterior Area <sup>1</sup>
Parking and Asphalt Striping	42,145	0.06	2,529		2,529
Prefabricated Buildings	1,645	2	3,290	2,468	823

1 CalEEMod methodology calculates the paintable interior and exterior areas by multiplying the total paintable surface area by 75 and 25 percent, respectively. Architectural coatings for the parking lot is based on CalEEMod methodology applied to a surface parking lot (i.e., striping), in which 6% of surface area is painted.

2 Applied CalEEMod Methodology in calculating total. The program assumes the total surface for painting equals 2.7 times the floor square footage for residential and 2 times that for nonresidential square footage defined by the user. The default values based on SCAQMD methods used in their coating rules are 75% for the interior surfaces and 25% for the exterior shell

Construction - Unmitigated Run

SCAQMD Rule 403		
Replace Ground Cover	PM10:	5 % Reduction
	PM25:	5 % Reduction
Water Exposed Area	Frequency:	2 per day
	PM10:	55 % Reduction
	PM25:	55 % Reduction
Unpaved Roads	Vehicle Speed:	15 mph
SCAQMD Rule 1186		
Clean Paved Road	9	% PM Reduction



**CalEEMod Construction Phase Inputs\***

5-Day Work Week/8 hours per day

Phase Name	Phase Type	Start Date	End Date	CalEEMod Total Days	Total Days
Asphalt Demo	Demolition	6/1/2018	6/28/2018	20	27
<i>Asphalt Demo Haul</i>	<i>Demolition</i>	<i>6/1/2018</i>	<i>6/28/2018</i>	<i>20</i>	<i>27</i>
Site Preparation	Site Preparation	6/29/2018	7/5/2018	5	6
Rough Grading	Rough Grading	7/6/2018	7/27/2018	16	21
<i>Rough Grading Haul</i>	<i>Haul</i>	<i>7/6/2018</i>	<i>7/27/2018</i>	<i>16</i>	<i>21</i>
Utility Trenching	Utility Trenching	7/28/2018	8/6/2018	6	9
Asphalt Paving	Asphalt Paving	8/7/2018	8/30/2018	18	23
Landscaping/Field Lighting	Construction	8/7/2018	8/30/2018	18	23
Architectural Coating	Architectural Coating	8/31/2018	9/26/2018	18	26

\*CalEEMod Defaults Used

# CalEEMod Construction Off-Road Equipment Inputs\*

Equipment Type	CalEEMod Equipment Type	Unit Amount	Hours/Day	HP	LF	Worker Trips	Vendor Trips
<b>Asphalt Demolition</b>						15	
Concrete/Industrial Saws	Concrete/Industrial Saws	1	8	81	0.73		
Excavators	Excavators	3	8	158	0.38		
Rubber Tired Dozers	Rubber Tired Dozers	2	8	247	0.4		
Water Truck							4
<b>Site Preparation</b>						18	
Rubber Tired Dozers	Rubber Tired Dozers	3	8	247	0.4		
Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	4	8	97	0.37		
Water Truck							4
<b>Grading</b>						15	
Excavators	Excavators	1	8	158	0.38		
Graders	Graders	1	8	187	0.41		
Rubber Tired Dozers	Rubber Tired Dozers	1	8	247	0.4		
Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	3	8	97	0.37		
Water Truck							4
<b>Utility Trenching</b>						5	
Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	2	8	97	0.37		
Water Truck							4
<b>Landscaping/Field Lighting</b>						18	
Rubber Tired Loaders	Rubber Tired Loaders	1	8	247	0.3953		
Cranes	Cranes	1	6	231	0.2881		
Forklifts	Forklifts	1	6	89	0.201		
<b>Paving</b>						20	
Cement and Mortar Mixers	Cement and Mortar Mixers	2	6	9	0.56		
Pavers	Pavers	1	8	130	0.42		
Paving Equipment	Paving Equipment	2	6	132	0.36		
Rollers	Rollers	2	6	80	0.38		
Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	1	8	97	0.37		
<b>Architectural Coating</b>						4	
Air Compressors	Air Compressors	1	6	78	0.48		

\*Equipment mix, Worker Trips, and Vendor Trips based on CalEEMod default

## Pavement Volume to Weight Conversion

Duration	Total SF of Parking Lot	Assumed Thickness (foot) <sup>1</sup>	Debris Volume (cu. ft)	Weight of Crushed Asphalt (lbs/cf) <sup>2</sup>	AC Mass (lbs)	AC Mass (tons)
Demolition	42,145	0.33	14048	45	632,175	316.09

<sup>1</sup> *Pavements and Surface Materials*. Nonpoint Education for Municipal Officials, Technical Paper Number 8. University of Connecticut Cooperative Extension System, 1999.

<sup>2</sup> <http://www.reade.com/reade-resources/reference-educational/reade-reference-chart-particle-property-briefings/26-weight-per-cubic-foot-and-specific-gravity-metals-minerals-organics-inorganics-ceramics>

CalEEMod Project Characteristics Inputs

Project Address: 1221 Monterey Road, Glendale  
Project Location: Los Angeles-- South Coast 91206  
Climate Zone: 12  
Land Use Setting: Urban  
Operational Year: 2018  
Utility Company: Southern California Edison  
Air Basin: South Coast Air Basin  
Air District: SCAQMD  
SRA: 7

Total Project Site Acreage:	9.93	acres
Acreage to be distrubed:	3.85	acres

CalEEMod Land Use Inputs

Land Use	Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	Square Feet
School Buildings	Educational	Junior High School	1.65	1000 sqft	0.04	1,645
Non-Parking Asphalt	Parking	Other Asphalt Surfaces	42.1	1000 sqft	0.97	42,145
Landscape, Turf	Parking	Other Non-Asphalt Surfaces	123.9	1000sqft	2.84	0
					3.85	acre

**Trip Generation**

	Weekday	Weekends	
Trip Generation*	182	235	Average Daily Trips (ADT)
ITE Manual Highest Scenario Trip Rate	90.81	71.33	trips/field
Adjusted CalEEMod Trip Rate	<b>110.64</b>	<b>142.86</b>	trips/1000sqft

\*Based on Traffic Impact Analysis for North Elementary School. PlaceWorks, November 2017.

Trip rates based on ITE Trip Generation Manual 9th Edition Soccer Complex land use (code 488). Analysis uses most conservative "Highest Rate" trip generation scenario

**Lighting (Electricity Use)\***

Number of Fixtures	30
Total Kilowatt	34.50 kW

	Hours Per Day	Days Per Year	Total kWh/yr
Lighting Use	5	340	58,650.00

	KWhr/size/yr	Kwh/year	KWhr/size/yr with Stadium
Lighting in CalEEMod	2.59	<b>4260.55</b>	<b>38,243.50</b>

**Calculation of GHGs from Field Lighting (City of Glendale)**

CO <sub>2</sub> **	CH <sub>4</sub> **	N <sub>2</sub> O**	CO <sub>2</sub> e	CO <sub>2</sub> e
lbs/Mwh	lbs/Mwh	lbs/Mwh	lbs/Mwh	MT/Kwh
383.88	0.095	0.012	389.95	0.000177
CO2 from Lighting				<b>10.37</b>

\*Global Warming Potentials from the Climate Change 2007, IPCC Fourth Assessment Report (AR4).

\*\*City of Glendale Power Mix from California Department of Energy. Utility Annual Power Content Labels for 2016. 2016 City of Glendale Power Content Label.

<http://www.energy.ca.gov/pcl/labels/>

**Solid Waste**

Solid Waste Generation: 0.00 TPY

*\*The project would not result in an increase in long-term solid waste disposal***Water Use**

Septic Tank	0%	
Aerobic	100%	
Facultative Lagoons	0%	
Indoor Water Use:	34,025	GPY
Outdoor Water Use:	87,492	GPY

*\* Provided by the Applicant***Architectural Coating****Non-Residential Architectural Coating**

Percentage of Buildings' Interior Painted:	100%
Percentage of Buildings' Exterior Painted:	100%

**SCAQMD Rule 1113**

Interior Paint VOC content:	50	grams per liter
Exterior Paint VOC content:	50	grams per liter

Nonresidential Structures	Land Use Square Feet	SCAQMD Factor	Total Paintable Surface Area <sup>2</sup>	Paintable Interior Area <sup>1</sup>	Paintable Exterior Area <sup>1</sup>
Parking and Asphalt Striping	42,145	0.06	2,529		2,529
School Restroom and Shed	1,645	2	3,290	2,468	823

<sup>1</sup> CalEEMod methodology calculates the paintable interior and exterior areas by multiplying the total paintable surface area by 75 and 25 percent, respectively. Architectural coatings for the parking lot is based on CalEEMod methodology applied to a surface parking lot (i.e., striping), in which 6% of surface area is painted.

<sup>2</sup> Applied CalEEMod Methodology in calculating total. The program assumes the total surface for painting equals 2.7 times the floor square footage for residential and 2 times that for nonresidential square footage defined by the user. The default values based on SCAQMD methods used in their coating rules are 75% for the interior surfaces and 25% for the exterior shell

**Energy Mitigation****2016 Building Energy Efficiency Standards**

Buildings constructed after January 1, 2017 are required to meet the 2016 Building Energy Efficiency Standards.

Non-Residential Exceed Title 24 5% Improvement over 2013<sup>1</sup>

Sources:

<sup>1</sup> California Energy Commission. 2015a. 2016 Building Energy Efficiency Standards, Adoption Hearing Presentation. <http://www.energy.ca.gov/title24/2016standards/rulemaking/documents/> June 10.

**Water Mitigation**

Install Low Flow Bathroom Faucet	32	% Reduction in flow
Install Low Flow Kitchen Faucet	18	% Reduction in flow
Install Low Flow Toilet	20	% Reduction in flow
Install Low Flow Shower	20	% Reduction in flow
Use Water Efficiency Irrigation System	6.1	% Reduction in flow

## Changes to the CalEEMod Defaults - Fleet Mix 2018 (Proposed)

Trips 182

Default	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH	
FleetMix (Model Default)	0.548	0.046127	0.19933	0.125604	0.017697	0.005953	0.01836	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944	100%
Trips	100	8	36	23	3	1	3	5	0	0	1	0	0	182
Percent	80%			13%	8%									100%
without buses/MH	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0	0	0.004804	0.000000	0	99%
Percent	80%			13%	7%									99%
Adjusted without buses/MH	0.547972	0.046127	0.199330	0.125604	0.019358	0.006512	0.020083	0.030210	0.000000	0.000000	0.005255	0.000000	0.000000	
Percent check	80%			13%	8%									100%
Assumed Mix	98.0%			1.00%	1.00%									100%
adjusted with Assumed	0.672372	0.056599	0.244582	0.010000	0.002542	0.000855	0.002637	0.003967	0.000000	0.000000	0.006448	0.000000	0.000000	100%
Trips	122	10	45	2	0	0	0	1	0	0	1	0	0	182
Check	178			2	2									
Source:	Traffic Impact Analysis for Wilson Middle School. PlaceWorks, November 2017.													

## CITY OF GLENDALE POWER CONTENT

MTCO<sub>2</sub>e

Source	Percent*	Adjusted percent	Emission factor (MTCO <sub>2</sub> e/KWH)**
Coal	5.00%	5.00%	0.000981684
Large hydro	10.00%	10.00%	0
Natural gas	29.00%	29.00%	0.000387842
Nuclear	7.00%	7.00%	0
Oil	0.00%	0.00%	0.00056559
Other/unspecified	1.00%	1.00%	0.000428
Biomass	12.00%	12.00%	7.41486E-05
Geothermal	2.00%	2.00%	0.000107172
Small hydro	8.00%	8.00%	0
Solar	0.00%	0.00%	5.7828E-06
Wind	26.00%	26.00%	0
	100.00%	100.00%	

<b>Emission factor</b>	<b>0.000176880</b>	MTCO <sub>2</sub> e/KWH
------------------------	--------------------	-------------------------

Calculation check 0.000176880

0.26

MTCO <sub>2</sub> e/kWh	0.000428	CO <sub>2</sub>	83.1
		CH <sub>4</sub>	0.27
		N <sub>2</sub> O	0.3
			83.67

\*City of Glendale Power Mix from California Department of Energy. Utility Annual Power Content Labels for 2016. 2016 City of Glendale Power Content Label. <http://www.energy.ca.gov/pcl/labels/>

\*\*Global Warming Potentials from the Climate Change 2007, IPCC Fourth Assessment Report (AR4).



## CITY OF GLENDALE POWER CONTENT

MTCO<sub>2</sub>

Source	Percent*	Adjusted percent	Emission factor (MTCO <sub>2</sub> /KWH)**
Coal	5.00%	5.00%	0.000974076
Large hydro	10.00%	10.00%	0
Natural gas	29.00%	29.00%	0.000387411
Nuclear	7.00%	7.00%	0
Oil	0.00%	0.00%	0.000563808
Other/unspecified	1.00%	1.00%	0.00042508
Biomass	12.00%	12.00%	5.5648E-05
Geothermal	2.00%	2.00%	0.000107172
Small hydro	8.00%	8.00%	0
Solar	0.00%	0.00%	5.77688E-06
Wind	26.00%	26.00%	0
	100.00%	100.00%	

Emission factor	<b>0.000174125</b> MTCO <sub>2</sub> /KWH
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MTCO <sub>2</sub> e		GWP
0.993187522	0.000425	1
0.003226963	0.000001	25
0.003585515	0.000002	298

\*City of Glendale Power Mix from California Department of Energy. Utility Annual Power Content Labels for 2016. 2016 City of Glendale Power Content Label. <http://www.energy.ca.gov/pcl/labels/>

\*\*Global Warming Potentials from the Climate Change 2007, IPCC Fourth Assessment Report (AR4).

## CITY OF GLENDALE POWER CONTENT

MTCH<sub>4</sub>

Source	Percent*	Adjusted percent	Emission factor (MTCH <sub>4</sub> /KWH)**
Coal	5.00%	5.00%	1.10044E-07
Large hydro	10.00%	10.00%	0
Natural gas	29.00%	29.00%	7.80947E-09
Nuclear	7.00%	7.00%	0
Oil	0.00%	0.00%	2.22183E-08
Other/unspecified	1.00%	1.00%	0.00000006
Biomass	12.00%	12.00%	2.88637E-07
Geothermal	2.00%	2.00%	0
Small hydro	8.00%	8.00%	0
Solar	0.00%	0.00%	1.08065E-10
Wind	26.00%	26.00%	0
	100.00%	100.00%	

<b>Emission factor</b>	<b>0.000000043</b>	MTCH <sub>4</sub> /KWH
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MT/gas

0.00042508

0.00000006

0.00000001

\*City of Glendale Power Mix from California Department of Energy. Utility Annual Power Content Labels for 2016. 2016 City of Glendale Power Content Label. <http://www.energy.ca.gov/pcl/labels/>

\*\*Global Warming Potentials from the Climate Change 2007, IPCC Fourth Assessment Report (AR4).

## CITY OF GLENDALE POWER CONTENT

MTN<sub>2</sub>O

Source	Percent*	Adjusted percent	Emission factor (MTNO <sub>2</sub> /KWH)**
Coal	5.00%	5.00%	1.63004E-08
Large hydro	10.00%	10.00%	0
Natural gas	29.00%	29.00%	7.9203E-10
Nuclear	7.00%	7.00%	0
Oil	0.00%	0.00%	4.1182E-09
Other/unspecified	1.00%	1.00%	0.00
Biomass	12.00%	12.00%	3.78679E-08
Geothermal	2.00%	2.00%	0
Small hydro	8.00%	8.00%	0
Solar	0.00%	0.00%	1.08002E-11
Wind	26.00%	26.00%	0
	100.00%	100.00%	

Emission factor	0.0000000056	MTN <sub>2</sub> O/KWH
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\*City of Glendale Power Mix from California Department of Energy. Utility Annual Power Content Labels for 2016. 2016 Glendale Power Content Label. <http://www.energy.ca.gov/pcl/labels/>

\*\*Global Warming Potentials from the Climate Change 2007, IPCC Fourth Assessment Report (AR4).

Emission Factor Calculator

Select GWPs	AR4
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CO <sub>2</sub>	1
CH <sub>4</sub>	25
N <sub>2</sub> O	298

Fuel type	MWh generated	lbs CO <sub>2</sub> /kWh	lbs CH <sub>4</sub> /kWh	lbs N <sub>2</sub> O/kWh	lbs CO <sub>2</sub> e/kWh	MTCO <sub>2</sub> e/kWh
Biomass	6,006,423	0.122682	0.000636	0.000083	0.163468	0.000074
Coal	835,811	2.147448	0.000243	0.000036	2.164222	0.000982
Gas	108,673,627	0.854086	0.000017	0.000002	0.855036	0.000388
Geothermal	7,308,060	0.236272	0.000000	0.000000	0.236272	0.000107
Hydro	14,313,811	0.000000	0.000000	0.000000	0.000000	-
Nuclear	16,985,978	0.000000	0.000000	0.000000	0.000000	-
Oil	19,345	1.242971	0.000049	0.000009	1.246901	0.000566
Solar	7,473,990	0.012736	0.000000	0.000000	0.012749	0.000006
Wind	12,168,969	0.000000	0.000000	0.000000	0.000000	-
Other	1,789,739					0.000428

334,944.51  
815,845.87  
42,189,356.30  
784,860.20  
-  
-  
10,929.49  
43,266.60  
-

<< CARB

AR2  
AR4  
AR5

	AR2	AR4	AR5
CO <sub>2</sub>	1	1	1
CH <sub>4</sub>	21	25	28
N <sub>2</sub> O	310	298	265

kWh per MWh	1,000
kWh per GWh	1,000,000
lbs per MT	2204.6

## Regional Construction Emissions Worksheet

### Asphalt Demolition Summer

		2018	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite								
	Fugitive Dust						0	0
	Off-Road		3.719	38.3225	22.304	0.0388	1.9386	1.8048
	Total		<b>3.719</b>	<b>38.3225</b>	<b>22.304</b>	<b>0.0388</b>	<b>1.9386</b>	<b>1.8048</b>
Offsite								
	Hauling		0	0	0	0	0	0
	Vendor		0.0184	0.4902	0.134	1.06E-03	0.0274	0.0103
	Worker		0.0829	0.0625	0.8101	1.89E-03	0.156	0.0426
	Total		<b>0.1013</b>	<b>0.5528</b>	<b>0.9442</b>	<b>2.95E-03</b>	<b>0.1835</b>	<b>0.0529</b>
<b>TOTAL</b>			<b>3.8203</b>	<b>38.8753</b>	<b>23.2482</b>	<b>0.0418</b>	<b>2.1221</b>	<b>1.8577</b>

### Asphalt Demolition Winter

		2018	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite								
	Fugitive Dust						0	0
	Off-Road		3.719	38.3225	22.304	0.0388	1.9386	1.8048
	Total		<b>3.719</b>	<b>38.3225</b>	<b>22.304</b>	<b>0.0388</b>	<b>1.9386</b>	<b>1.8048</b>
Offsite								
	Hauling		0	0	0	0	0	0
	Vendor		0.0192	0.4913	0.1473	1.03E-03	0.0275	0.0103
	Worker		0.0917	0.0693	0.7459	1.78E-03	0.156	0.0426
	Total		<b>0.1109</b>	<b>0.5606</b>	<b>0.8932</b>	<b>2.81E-03</b>	<b>0.1835</b>	<b>0.053</b>
<b>TOTAL</b>			<b>3.8299</b>	<b>38.8831</b>	<b>23.1972</b>	<b>0.0416</b>	<b>2.1221</b>	<b>1.8578</b>

### Asphalt Demolition Haul Summer

		2018	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite								
	Fugitive Dust						1.45E-01	2.19E-02
	Off-Road		0	0	0	0	0	0
	Total		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.45E-01</b>	<b>2.19E-02</b>
Offsite								
	Hauling		0.0159	0.5169	0.107	1.30E-03	0.028	9.08E-03
	Vendor		0	0	0	0	0	0
	Worker		0	0	0	0	0	0
	Total		<b>0.0159</b>	<b>0.5169</b>	<b>0.107</b>	<b>1.30E-03</b>	<b>0.028</b>	<b>9.08E-03</b>
<b>TOTAL</b>			<b>0.0159</b>	<b>0.5169</b>	<b>0.1070</b>	<b>0.0013</b>	<b>0.1725</b>	<b>0.0310</b>

<b>Summer Demolition + Haul</b>	<b>3.8362</b>	<b>39.3922</b>	<b>23.3552</b>	<b>0.0431</b>	<b>2.2946</b>	<b>1.8887</b>
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### Asphalt Demolition Haul Winter

		2018	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite								
	Fugitive Dust						1.45E-01	2.19E-02
	Off-Road		0	0	0	0	0	0
	Total		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.45E-01</b>	<b>2.19E-02</b>
Offsite								
	Hauling		0.0163	0.524	0.1144	1.28E-03	0.0281	9.12E-03
	Vendor		0	0	0	0	0	0
	Worker		0	0	0	0	0	0
	Total		<b>0.0163</b>	<b>0.524</b>	<b>0.1144</b>	<b>1.28E-03</b>	<b>0.0281</b>	<b>9.12E-03</b>
<b>TOTAL</b>			<b>0.0163</b>	<b>0.5240</b>	<b>0.1144</b>	<b>0.0013</b>	<b>0.1726</b>	<b>0.0310</b>

<b>Winter Demolition Haul</b>	<b>3.8462</b>	<b>39.4071</b>	<b>23.3116</b>	<b>0.0429</b>	<b>2.2947</b>	<b>1.8888</b>
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Site Preparation Summer							
		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	2018						
	Fugitive Dust					7.7233	4.2454
	Off-Road	4.5627	48.1988	22.4763	0.038	2.5769	2.3708
	Total	<b>4.5627</b>	<b>48.1988</b>	<b>22.4763</b>	<b>0.038</b>	<b>10.3002</b>	<b>6.6161</b>
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0.0184	0.4902	0.134	1.06E-03	0.0274	0.0103
	Worker	0.0995	0.0751	0.9721	2.27E-03	0.1873	0.0512
	Total	<b>0.1179</b>	<b>0.5653</b>	<b>1.1062</b>	<b>3.33E-03</b>	<b>0.2147</b>	<b>0.0614</b>
<b>TOTAL</b>		<b>4.6806</b>	<b>48.7641</b>	<b>23.5825</b>	<b>0.0413</b>	<b>10.5149</b>	<b>6.6775</b>
Site Preparation Winter							
		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	2018						
	Fugitive Dust					7.7233	4.2454
	Off-Road	4.5627	48.1988	22.4763	0.038	2.5769	2.3708
	Total	<b>4.5627</b>	<b>48.1988</b>	<b>22.4763</b>	<b>0.038</b>	<b>10.3002</b>	<b>6.6161</b>
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0.0192	0.4913	0.1473	1.03E-03	0.0275	0.0103
	Worker	0.1101	0.0831	0.8951	2.14E-03	0.1873	0.0512
	Total	<b>0.1293</b>	<b>0.5745</b>	<b>1.0424</b>	<b>3.17E-03</b>	<b>0.2147</b>	<b>0.0615</b>
<b>TOTAL</b>		<b>4.6920</b>	<b>48.7733</b>	<b>23.5187</b>	<b>0.0412</b>	<b>10.5149</b>	<b>6.6776</b>
Grading Summer							
		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	2018						
	Fugitive Dust					2.8011	1.4396
	Off-Road	2.7733	30.6725	16.577	0.0297	1.5513	1.4272
	Total	<b>2.7733</b>	<b>30.6725</b>	<b>16.577</b>	<b>0.0297</b>	<b>4.3524</b>	<b>2.8668</b>
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0.0184	0.4902	0.134	1.06E-03	0.0274	0.0103
	Worker	0.0829	0.0625	0.8101	1.89E-03	0.156	0.0426
	Total	<b>0.1013</b>	<b>0.5528</b>	<b>0.9442</b>	<b>2.95E-03</b>	<b>0.1835</b>	<b>0.0529</b>
<b>TOTAL</b>		<b>2.8746</b>	<b>31.2253</b>	<b>17.5212</b>	<b>0.0327</b>	<b>4.5359</b>	<b>2.9197</b>
Grading Winter							
		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	2018						
	Fugitive Dust					2.8011	1.4396
	Off-Road	2.7733	30.6725	16.577	0.0297	1.5513	1.4272
	Total	<b>2.7733</b>	<b>30.6725</b>	<b>16.577</b>	<b>0.0297</b>	<b>4.3524</b>	<b>2.8668</b>
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0.0192	0.4913	0.1473	1.03E-03	0.0275	0.0103
	Worker	0.0917	0.0693	0.7459	1.78E-03	0.156	0.0426
	Total	<b>0.1109</b>	<b>0.5606</b>	<b>0.8932</b>	<b>2.81E-03</b>	<b>0.1835</b>	<b>0.053</b>
<b>TOTAL</b>		<b>2.8842</b>	<b>31.2331</b>	<b>17.4702</b>	<b>0.0325</b>	<b>4.5359</b>	<b>2.9198</b>
Grading Soil Haul Summer							
		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	2018						
	Fugitive Dust					0.0404	6.12E-03
	Off-Road	0	0	0	0	0	0
	Total	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0404</b>	<b>6.12E-03</b>
Offsite							
	Hauling	1.0379	33.7804	6.9897	0.0848	1.8322	0.5935
	Vendor	0	0	0	0	0	0
	Worker	0	0	0	0	0	0
	Total	<b>1.0379</b>	<b>33.7804</b>	<b>6.9897</b>	<b>0.0848</b>	<b>1.8322</b>	<b>0.5935</b>
<b>TOTAL</b>		<b>1.0379</b>	<b>33.7804</b>	<b>6.9897</b>	<b>0.0848</b>	<b>1.8726</b>	<b>0.5996</b>
<b>Grading + Haul</b>		<b>3.9125</b>	<b>65.0057</b>	<b>24.5109</b>	<b>0.1175</b>	<b>6.4085</b>	<b>3.5193</b>
Grading Haul Winter							
		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	2018						
	Fugitive Dust					0.0404	6.12E-03
	Off-Road	0	0	0	0	0	0
	Total	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0404</b>	<b>6.12E-03</b>
Offsite							
	Hauling	1.0641	34.2431	7.4775	0.0833	1.8347	0.5959
	Vendor	0	0	0	0.00E+00	0	0
	Worker	0	0	0	0.00E+00	0	0
	Total	<b>1.0641</b>	<b>34.2431</b>	<b>7.4775</b>	<b>8.33E-02</b>	<b>1.8347</b>	<b>0.5959</b>
<b>TOTAL</b>		<b>1.0641</b>	<b>34.2431</b>	<b>7.4775</b>	<b>0.0833</b>	<b>1.8751</b>	<b>0.6020</b>
<b>Grading + Haul</b>		<b>2.1020</b>	<b>68.0235</b>	<b>14.4672</b>	<b>0.1681</b>	<b>3.7477</b>	<b>1.2016</b>



Utility Trenching Summer							
		2018	ROG	NOx	CO	SO2	PM10 Total PM2.5 Total
Onsite							
	Off-Road		0.5322	5.2595	4.6734	6.21E-03	0.3726 0.3428
	Total		<b>0.5322</b>	<b>5.2595</b>	<b>4.6734</b>	<b>6.21E-03</b>	<b>0.3726 0.3428</b>
Offsite							
	Hauling		0	0	0	0	0
	Vendor		0.0184	0.4902	0.134	1.06E-03	0.0274 0.0103
	Worker		0.0276	0.0209	0.27	6.30E-04	0.052 0.0142
	Total		<b>0.046</b>	<b>0.5111</b>	<b>0.4041</b>	<b>1.69E-03</b>	<b>0.0794 0.0245</b>
<b>TOTAL</b>			<b>0.5782</b>	<b>5.7706</b>	<b>5.0775</b>	<b>0.0079</b>	<b>0.4520 0.3673</b>

Utility Trenching Winter							
		2018	ROG	NOx	CO	SO2	PM10 Total PM2.5 Total
Onsite							
	Off-Road		0.5322	5.2595	4.6734	6.21E-03	0.3726 0.3428
	Total		<b>0.5322</b>	<b>5.2595</b>	<b>4.6734</b>	<b>6.21E-03</b>	<b>0.3726 0.3428</b>
Offsite							
	Hauling		0	0	0	0	0
	Vendor		0.0192	0.4913	0.1473	1.03E-03	0.0275 0.0103
	Worker		0.0306	0.0231	0.2486	5.90E-04	0.052 0.0142
	Total		<b>0.0498</b>	<b>0.5144</b>	<b>0.396</b>	<b>1.62E-03</b>	<b>0.0795 0.0245</b>
<b>TOTAL</b>			<b>0.5820</b>	<b>5.7739</b>	<b>5.0694</b>	<b>0.0078</b>	<b>0.4521 0.3673</b>

Landscaping + Field Lighting Summer							
		2018	ROG	NOx	CO	SO2	PM10 Total PM2.5 Total
Onsite							
	Off-Road		1.5789	17.4216	6.7126	0.0133	0.8474 0.7796
	Total		<b>1.5789</b>	<b>17.4216</b>	<b>6.7126</b>	<b>0.0133</b>	<b>0.8474 0.7796</b>
Offsite							
	Hauling		0	0	0	0	0
	Vendor		0.0322	0.8579	0.2346	1.85E-03	0.048 0.018
	Worker		0.0995	0.0751	0.9721	2.27E-03	0.1873 0.0512
	Total		<b>0.1317</b>	<b>0.933</b>	<b>1.2067</b>	<b>4.12E-03</b>	<b>0.2352 0.0691</b>
<b>TOTAL</b>			<b>1.7106</b>	<b>18.3546</b>	<b>7.9193</b>	<b>0.0174</b>	<b>1.0826 0.8487</b>

<b>Paving + Landscaping</b>			<b>3.3920</b>	<b>32.9564</b>	<b>21.4328</b>	<b>0.0388</b>	<b>2.1277 1.6773</b>
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Landscaping + Field Lighting Winter							
		2018	ROG	NOx	CO	SO2	PM10 Total PM2.5 Total
Onsite							
	Off-Road		1.5789	17.4216	6.7126	0.0133	0.8474 0.7796
	Total		<b>1.5789</b>	<b>17.4216</b>	<b>6.7126</b>	<b>0.0133</b>	<b>0.8474 0.7796</b>
Offsite							
	Hauling		0	0	0	0	0
	Vendor		0.0336	0.8599	0.2578	1.80E-03	0.0481 0.0181
	Worker		0.1101	0.0831	0.8951	2.14E-03	0.1873 0.0512
	Total		<b>0.1436</b>	<b>0.943</b>	<b>1.1529</b>	<b>3.94E-03</b>	<b>0.2353 0.0692</b>
<b>TOTAL</b>			<b>1.7225</b>	<b>18.3646</b>	<b>7.8655</b>	<b>0.0172</b>	<b>1.0827 0.8488</b>

<b>Paving + Landscaping</b>			<b>3.4157</b>	<b>32.9753</b>	<b>21.2933</b>	<b>0.0385</b>	<b>2.1278 1.6774</b>
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Asphalt Paving Summer							
		2018	ROG	NOx	CO	SO2	PM10 Total PM2.5 Total
Onsite							
	Off-Road		1.4239	14.5184	12.4333	0.0189	0.837 0.7718
	Paving		0.147				0
	Total		<b>1.5709</b>	<b>14.5184</b>	<b>12.4333</b>	<b>0.0189</b>	<b>0.837 0.7718</b>
Offsite							
	Hauling		0	0	0	0	0
	Vendor		0	0	0	0.00E+00	0
	Worker		0.1105	0.0834	1.0802	2.52E-03	0.2081 0.0568
	Total		<b>0.1105</b>	<b>0.0834</b>	<b>1.0802</b>	<b>2.52E-03</b>	<b>0.2081 0.0568</b>
<b>TOTAL</b>			<b>1.6814</b>	<b>14.6018</b>	<b>13.5135</b>	<b>0.0214</b>	<b>1.0451 0.8286</b>

Asphalt Paving Winter			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2018						
	Off-Road		1.4239	14.5184	12.4333	0.0189	0.837	0.7718
	Paving		0.147				0	0
	Total		1.5709	14.5184	12.4333	0.0189	0.837	0.7718
Offsite								
	Hauling		0	0	0	0	0	0
	Vendor		0	0	0	0.00E+00	0	0
	Worker		0.1223	0.0923	0.9945	2.37E-03	0.2081	0.0568
	Total		0.1223	0.0923	0.9945	2.37E-03	0.2081	0.0568
<b>TOTAL</b>			1.6932	14.6107	13.4278	0.0213	1.0451	0.8286

Architectural Coating Summer							
		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	2018						
	Archit. Coating	0.7493				0	0
	Off-Road	0.2986	2.0058	1.8542	2.97E-03	0.1506	0.1506
	Total	<b>1.048</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.97E-03</b>	<b>0.1506</b>	<b>0.1506</b>
Offsite							
	Hauling	2.21E-03	0.0718	0.0149	1.80E-04	3.89E-03	1.26E-03
	Vendor	0	0	0	0.00E+00	0	0
	Worker	0.0221	0.0167	0.216	5.00E-04	0.0416	0.0114
	Total	<b>0.0243</b>	<b>0.0885</b>	<b>0.2309</b>	<b>6.80E-04</b>	<b>0.0455</b>	<b>0.0126</b>
<b>TOTAL</b>		<b>1.0723</b>	<b>2.0943</b>	<b>2.0851</b>	<b>0.0037</b>	<b>0.1961</b>	<b>0.1632</b>

Architectural Coating Winter							
		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	2018						
	Archit. Coating	0.7493				0	0
	Off-Road	0.2986	2.0058	1.8542	2.97E-03	0.1506	0.1506
	Total	<b>1.048</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.97E-03</b>	<b>0.1506</b>	<b>0.1506</b>
Offsite							
	Hauling	2.26E-03	0.0728	0.0159	1.80E-04	3.90E-03	1.27E-03
	Vendor	0	0	0	0.00E+00	0	0
	Worker	0.0245	0.0185	0.1989	4.70E-04	0.0416	0.0114
	Total	<b>0.0267</b>	<b>0.0913</b>	<b>0.2148</b>	<b>6.50E-04</b>	<b>0.0455</b>	<b>0.0126</b>
<b>TOTAL</b>		<b>1.0747</b>	<b>2.0971</b>	<b>2.0690</b>	<b>0.0036</b>	<b>0.1961</b>	<b>0.1632</b>

<b>MAX DAILY</b>	<b>4.69</b>	<b>68.02</b>	<b>24.51</b>	<b>0.17</b>	<b>10.51</b>	<b>6.68</b>
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<b>Regional Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
Exceeds Thresholds?	No	No	No	No	No	No

## Localized Construction Emissions Worksheet

### Asphalt Demolition

		NOx	CO	PM10 Total	PM2.5 Total
Onsite	<b>2019</b>				
	Fugitive Dust	0	0	0	0
	Off-Road	38.3225	22.304	1.9386	1.8048
	Total	38.3225	22.304	1.9386	1.8048
1 Acre LSTs		80	498	4.00	3.00
Exceed Thresholds?		No	No	No	No

### Asphalt Demo Haul

		NOx	CO	PM10 Total	PM2.5 Total
Onsite	<b>2019</b>				
	Fugitive Dust	0	0	0.1445	0.0219
	Off-Road	0	0	0	0
	Total	0	0	0.1445	0.0219

<b>Demo + Haul</b>	<b>38.3225</b>	<b>22.3040</b>	<b>2.0831</b>	<b>1.8267</b>
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1 Acre LSTs	80	498	4.00	3.00
Exceed Thresholds?	No	No	No	No

### Site Preparation

		NOx	CO	PM10 Total	PM2.5 Total
Onsite	<b>2019</b>				
	Fugitive Dust	0	0	7.7233	4.2454
	Off-Road	48.1988	22.4763	2.5769	2.3708
	Total	48.1988	22.4763	10.3002	6.6161
3.5-Acre LSTs		143	1,110	10.49	6.00
Exceed Thresholds?		No	No	No	Yes

**Grading**

		NOx	CO	PM10 Total	PM2.5 Total
Onsite		<b>2019</b>			
	Fugitive Dust	0	0	2.8011	1.4396
	Off-Road	30.6725	16.577	1.5513	1.4272
	Total	30.6725	16.577	4.3524	2.8668

**Grading Haul**

		NOx	CO	PM10 Total	PM2.5 Total
Onsite		<b>2019</b>			
	Fugitive Dust	0	0	0.0404	0.00612
	Off-Road	0	0	0	0
	Total	0	0	0.0404	0.00612

<b>Grading + Haul</b>	<b>30.6725</b>	<b>16.5770</b>	<b>4.3928</b>	<b>2.8729</b>
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2.5-Acre LSTs	124	894	8.16	4.67
Exceed Thresholds?	No	No	No	No

**Utility Trenching**

		NOx	CO	PM10 Total	PM2.5 Total
Onsite		<b>2019</b>			
	Off-Road	5.2595	4.6734	0.3726	0.3428
	Total	5.2595	4.6734	0.3726	0.3428

1-Acre LSTs	80	498	4.00	3.00
Exceed Thresholds?	No	No	No	No

**Asphalt Paving**

		NOx	CO	PM10 Total	PM2.5 Total
Onsite		<b>2020</b>			
	Off-Road	14.5184	12.4333	0.837	0.7718
	Paving	0	0	0	0
	Total	14.5184	12.4333	0.837	0.7718

1-Acre LSTs	80	498	4.00	3.00
Exceed Thresholds?	No	No	No	No

**Lighting Installation**

		NOx	CO	PM10 Total	PM2.5 Total
Onsite		<b>2019</b>			
	Off-Road	17.4216	6.7126	0.8474	0.7796
	Total	17.4216	6.7126	0.8474	0.7796

<b>Paving + Lighting Installation</b>	<b>31.94</b>	<b>19.1459</b>	<b>1.6844</b>	<b>1.5514</b>
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1-Acre LSTs	80	498	4.00	3.00
Exceed Thresholds?	No	No	No	No

**Architectural Coating**

		NOx	CO	PM10 Total	PM2.5 Total
Onsite		<b>2020</b>			
	Archit. Coating	0	0	0	0
	Off-Road	2.0058	1.8542	0.1506	0.1506
	Total	2.0058	1.8542	0.1506	0.1506

1-Acre LSTs	80	498	4.00	3.00
Exceed Thresholds?	No	No	No	No

## Regional Construction Emissions Worksheet

### Asphalt Demolition Summer

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	<b>2018</b>						
	Fugitive Dust					0	0
	Off-Road	0.4623	2.0032	23.2798	0.0388	0.0616	0.0616
	Total	<b>0.4623</b>	<b>2.0032</b>	<b>23.2798</b>	<b>0.0388</b>	<b>0.0616</b>	<b>0.0616</b>
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0.0184	0.4902	0.134	1.06E-03	0.0274	0.0103
	Worker	0.0829	0.0625	0.8101	1.89E-03	0.156	0.0426
	Total	<b>0.1013</b>	<b>0.5528</b>	<b>0.9442</b>	<b>2.95E-03</b>	<b>0.1835</b>	<b>0.0529</b>
<b>TOTAL</b>		<b>0.5636</b>	<b>2.5560</b>	<b>24.2240</b>	<b>0.0418</b>	<b>0.2451</b>	<b>0.1145</b>

### Asphalt Demolition Winter

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	<b>2018</b>						
	Fugitive Dust					0	0
	Off-Road	0.4623	2.0032	23.2798	0.0388	0.0616	0.0616
	Total	<b>0.4623</b>	<b>2.0032</b>	<b>23.2798</b>	<b>0.0388</b>	<b>0.0616</b>	<b>0.0616</b>
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0.0192	0.4913	0.1473	1.03E-03	0.0275	0.0103
	Worker	0.0917	0.0693	0.7459	1.78E-03	0.156	0.0426
	Total	<b>0.1109</b>	<b>0.5606</b>	<b>0.8932</b>	<b>2.81E-03</b>	<b>0.1835</b>	<b>0.053</b>
<b>TOTAL</b>		<b>0.5732</b>	<b>2.5638</b>	<b>24.1730</b>	<b>0.0416</b>	<b>0.2451</b>	<b>0.1146</b>

### Asphalt Demolition Haul Summer

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	<b>2018</b>						
	Fugitive Dust					1.45E-01	2.19E-02
	Off-Road	0	0	0	0	0	0
	Total	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.45E-01</b>	<b>2.19E-02</b>
Offsite							
	Hauling	0.0159	0.5169	0.107	1.30E-03	0.028	9.08E-03
	Vendor	0	0	0	0	0	0
	Worker	0	0	0	0	0	0
	Total	<b>0.0159</b>	<b>0.5169</b>	<b>0.107</b>	<b>1.30E-03</b>	<b>0.028</b>	<b>9.08E-03</b>
<b>TOTAL</b>		<b>0.0159</b>	<b>0.5169</b>	<b>0.1070</b>	<b>0.0013</b>	<b>0.1725</b>	<b>0.0310</b>

**Summer Demolition + Haul**      **0.5795**    **3.0729**    **24.3310**    **0.0431**    **0.4176**    **0.1455**

### Asphalt Demolition Haul Winter

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	<b>2018</b>						
	Fugitive Dust					1.45E-01	2.19E-02
	Off-Road	0	0	0	0	0	0
	Total	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.45E-01</b>	<b>2.19E-02</b>
Offsite							
	Hauling	0.0163	0.524	0.1144	1.28E-03	0.0281	9.12E-03
	Vendor	0	0	0	0	0	0
	Worker	0	0	0	0	0	0
	Total	<b>0.0163</b>	<b>0.524</b>	<b>0.1144</b>	<b>1.28E-03</b>	<b>0.0281</b>	<b>9.12E-03</b>
<b>TOTAL</b>		<b>0.0163</b>	<b>0.5240</b>	<b>0.1144</b>	<b>0.0013</b>	<b>0.1726</b>	<b>0.0310</b>

**Winter Demolition Haul**      **0.5895**    **3.0878**    **24.2874**    **0.0429**    **0.4177**    **0.1456**

Site Preparation Summer							
		2018	ROG	NOx	CO	SO2	PM10 Total PM2.5 Total
Onsite	Fugitive Dust						7.7233 4.2454
	Off-Road		0.4656	2.0175	20.869	0.038	0.0621 0.0621
	Total		<b>0.4656</b>	<b>2.0175</b>	<b>20.869</b>	<b>0.038</b>	<b>7.7854 4.3075</b>
Offsite	Hauling		0	0	0	0	0 0
	Vendor		0.0184	0.4902	0.134	1.06E-03	0.0274 0.0103
	Worker		0.0995	0.0751	0.9721	2.27E-03	0.1873 0.0512
	Total		<b>0.1179</b>	<b>0.5653</b>	<b>1.1062</b>	<b>3.33E-03</b>	<b>0.2147 0.0614</b>
<b>TOTAL</b>			<b>0.5835</b>	<b>2.5828</b>	<b>21.9752</b>	<b>0.0413</b>	<b>8.0001 4.3689</b>
Site Preparation Winter							
		2018	ROG	NOx	CO	SO2	PM10 Total PM2.5 Total
Onsite	Fugitive Dust						7.7233 4.2454
	Off-Road		0.4656	2.0175	20.869	0.038	0.0621 0.0621
	Total		<b>0.4656</b>	<b>2.0175</b>	<b>20.869</b>	<b>0.038</b>	<b>7.7854 4.3075</b>
Offsite	Hauling		0	0	0	0	0 0
	Vendor		0.0192	0.4913	0.1473	1.03E-03	0.0275 0.0103
	Worker		0.1101	0.0831	0.8951	2.14E-03	0.1873 0.0512
	Total		<b>0.1293</b>	<b>0.5745</b>	<b>1.0424</b>	<b>3.17E-03</b>	<b>0.2147 0.0615</b>
<b>TOTAL</b>			<b>0.5949</b>	<b>2.5920</b>	<b>21.9114</b>	<b>0.0412</b>	<b>8.0001 4.3690</b>
Grading Summer							
		2018	ROG	NOx	CO	SO2	PM10 Total PM2.5 Total
Onsite	Fugitive Dust						2.8011 1.4396
	Off-Road		0.3632	1.5737	17.7527	0.0297	0.0484 0.0484
	Total		<b>0.3632</b>	<b>1.5737</b>	<b>17.7527</b>	<b>0.0297</b>	<b>2.8495 1.488</b>
Offsite	Hauling		0	0	0	0	0 0
	Vendor		0.0184	0.4902	0.134	1.06E-03	0.0274 0.0103
	Worker		0.0829	0.0625	0.8101	1.89E-03	0.156 0.0426
	Total		<b>0.1013</b>	<b>0.5528</b>	<b>0.9442</b>	<b>2.95E-03</b>	<b>0.1835 0.0529</b>
<b>TOTAL</b>			<b>0.4645</b>	<b>2.1265</b>	<b>18.6969</b>	<b>0.0327</b>	<b>3.0330 1.5409</b>
Grading Winter							
		2018	ROG	NOx	CO	SO2	PM10 Total PM2.5 Total
Onsite	Fugitive Dust						2.8011 1.4396
	Off-Road		0.3632	1.5737	17.7527	0.0297	0.0484 0.0484
	Total		<b>0.3632</b>	<b>1.5737</b>	<b>17.7527</b>	<b>0.0297</b>	<b>2.8495 1.488</b>
Offsite	Hauling		0	0	0	0	0 0
	Vendor		0.0192	0.4913	0.1473	1.03E-03	0.0275 0.0103
	Worker		0.0917	0.0693	0.7459	1.78E-03	0.156 0.0426
	Total		<b>0.1109</b>	<b>0.5606</b>	<b>0.8932</b>	<b>2.81E-03</b>	<b>0.1835 0.053</b>
<b>TOTAL</b>			<b>0.4741</b>	<b>2.1343</b>	<b>18.6459</b>	<b>0.0325</b>	<b>3.0330 1.5410</b>
Grading Soil Haul Summer							
		2018	ROG	NOx	CO	SO2	PM10 Total PM2.5 Total
Onsite	Fugitive Dust						0.0404 6.12E-03
	Off-Road		0	0	0	0	0 0
	Total		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0404 6.12E-03</b>
Offsite	Hauling		1.0379	33.7804	6.9897	0.0848	1.8322 0.5935
	Vendor		0	0	0	0	0 0
	Worker		0	0	0	0	0 0
	Total		<b>1.0379</b>	<b>33.7804</b>	<b>6.9897</b>	<b>0.0848</b>	<b>1.8322 0.5935</b>
<b>TOTAL</b>			<b>1.0379</b>	<b>33.7804</b>	<b>6.9897</b>	<b>0.0848</b>	<b>1.8726 0.5996</b>
<b>Grading + Haul</b>			<b>1.5024</b>	<b>35.9069</b>	<b>25.6866</b>	<b>0.1175</b>	<b>4.9056 2.1405</b>
Grading Haul Winter							
		2018	ROG	NOx	CO	SO2	PM10 Total PM2.5 Total
Onsite	Fugitive Dust						0.0404 6.12E-03
	Off-Road		0	0	0	0	0 0
	Total		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0404 6.12E-03</b>
Offsite	Hauling		1.0641	34.2431	7.4775	0.0833	1.8347 0.5959
	Vendor		0	0	0	0.00E+00	0 0
	Worker		0	0	0	0.00E+00	0 0
	Total		<b>1.0641</b>	<b>34.2431</b>	<b>7.4775</b>	<b>8.33E-02</b>	<b>1.8347 0.5959</b>
<b>TOTAL</b>			<b>1.0641</b>	<b>34.2431</b>	<b>7.4775</b>	<b>0.0833</b>	<b>1.8751 0.6020</b>
<b>Grading + Haul</b>			<b>1.5382</b>	<b>36.3774</b>	<b>26.1234</b>	<b>0.1158</b>	<b>4.9081 2.1430</b>

Utility Trenching Summer							
		2018	ROG	NOx	CO	SO2	PM10 Total PM2.5 Total
Onsite							
	Off-Road		0.076	0.3292	4.6841	6.21E-03	0.0101 0.0101
	Total		<b>0.076</b>	<b>0.3292</b>	<b>4.6841</b>	<b>6.21E-03</b>	<b>0.0101 0.0101</b>
Offsite							
	Hauling		0	0	0	0	0
	Vendor		0.0184	0.4902	0.134	1.06E-03	0.0274 0.0103
	Worker		0.0276	0.0209	0.27	6.30E-04	0.052 0.0142
	Total		<b>0.046</b>	<b>0.5111</b>	<b>0.4041</b>	<b>1.69E-03</b>	<b>0.0794 0.0245</b>
<b>TOTAL</b>			<b>0.1220</b>	<b>0.8403</b>	<b>5.0882</b>	<b>0.0079</b>	<b>0.0895 0.0346</b>

Utility Trenching Winter							
		2018	ROG	NOx	CO	SO2	PM10 Total PM2.5 Total
Onsite							
	Off-Road		0.076	0.3292	4.6841	6.21E-03	0.0101 0.0101
	Total		<b>0.076</b>	<b>0.3292</b>	<b>4.6841</b>	<b>6.21E-03</b>	<b>0.0101 0.0101</b>
Offsite							
	Hauling		0	0	0	0	0
	Vendor		0.0192	0.4913	0.1473	1.03E-03	0.0275 0.0103
	Worker		0.0306	0.0231	0.2486	5.90E-04	0.052 0.0142
	Total		<b>0.0498</b>	<b>0.5144</b>	<b>0.396</b>	<b>1.62E-03</b>	<b>0.0795 0.0245</b>
<b>TOTAL</b>			<b>0.1258</b>	<b>0.8436</b>	<b>5.0801</b>	<b>0.0078</b>	<b>0.0896 0.0346</b>

Landscaping + Field Lighting Summer							
		2018	ROG	NOx	CO	SO2	PM10 Total PM2.5 Total
Onsite							
	Off-Road		0.1634	0.7082	6.3457	0.0133	0.0218 0.0218
	Total		<b>0.1634</b>	<b>0.7082</b>	<b>6.3457</b>	<b>0.0133</b>	<b>0.0218 0.0218</b>
Offsite							
	Hauling		0	0	0	0	0
	Vendor		0.0322	0.8579	0.2346	1.85E-03	0.048 0.018
	Worker		0.0995	0.0751	0.9721	2.27E-03	0.1873 0.0512
	Total		<b>0.1317</b>	<b>0.933</b>	<b>1.2067</b>	<b>4.12E-03</b>	<b>0.2352 0.0691</b>
<b>TOTAL</b>			<b>0.2951</b>	<b>1.6412</b>	<b>7.5524</b>	<b>0.0174</b>	<b>0.2570 0.0909</b>

<b>Paving + Landscaping</b>			<b>0.8602</b>	<b>3.2278</b>	<b>22.6275</b>	<b>0.0388</b>	<b>0.5161 0.1987</b>
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Landscaping + Field Lighting Winter							
		2018	ROG	NOx	CO	SO2	PM10 Total PM2.5 Total
Onsite							
	Off-Road		0.1634	0.7082	6.3457	0.0133	0.0218 0.0218
	Total		<b>0.1634</b>	<b>0.7082</b>	<b>6.3457</b>	<b>0.0133</b>	<b>0.0218 0.0218</b>
Offsite							
	Hauling		0	0	0	0	0
	Vendor		0.0336	0.8599	0.2578	1.80E-03	0.0481 0.0181
	Worker		0.1101	0.0831	0.8951	2.14E-03	0.1873 0.0512
	Total		<b>0.1436</b>	<b>0.943</b>	<b>1.1529</b>	<b>3.94E-03</b>	<b>0.2353 0.0692</b>
<b>TOTAL</b>			<b>0.3070</b>	<b>1.6512</b>	<b>7.4986</b>	<b>0.0172</b>	<b>0.2571 0.0910</b>

<b>Paving + Landscaping</b>			<b>0.8839</b>	<b>3.2467</b>	<b>22.4880</b>	<b>0.0385</b>	<b>0.5162 0.1988</b>
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Asphalt Paving Summer							
		2018	ROG	NOx	CO	SO2	PM10 Total PM2.5 Total
Onsite							
	Off-Road		0.3076	1.5032	13.9949	0.0189	0.051 0.051
	Paving		0.147				0
	Total		<b>0.4546</b>	<b>1.5032</b>	<b>13.9949</b>	<b>0.0189</b>	<b>0.051 0.051</b>
Offsite							
	Hauling		0	0	0	0	0
	Vendor		0	0	0	0.00E+00	0
	Worker		0.1105	0.0834	1.0802	2.52E-03	0.2081 0.0568
	Total		<b>0.1105</b>	<b>0.0834</b>	<b>1.0802</b>	<b>2.52E-03</b>	<b>0.2081 0.0568</b>
<b>TOTAL</b>			<b>0.5651</b>	<b>1.5866</b>	<b>15.0751</b>	<b>0.0214</b>	<b>0.2591 0.1078</b>



Asphalt Paving Winter			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2018						
	Off-Road		0.3076	1.5032	13.9949	0.0189	0.051	0.051
	Paving		0.147				0	0
	Total		0.4546	1.5032	13.9949	0.0189	0.051	0.051
Offsite								
	Hauling		0	0	0	0	0	0
	Vendor		0	0	0	0.00E+00	0	0
	Worker		0.1223	0.0923	0.9945	2.37E-03	0.2081	0.0568
	Total		0.1223	0.0923	0.9945	2.37E-03	0.2081	0.0568
<b>TOTAL</b>			0.5769	1.5955	14.9894	0.0213	0.2591	0.1078

Architectural Coating Summer							
		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	2018						
	Archit. Coating	0.7493				0	0
	Off-Road	0.2986	2.0058	1.8542	2.97E-03	1.51E-01	1.51E-01
	Total	<b>1.048</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.97E-03</b>	<b>1.51E-01</b>	<b>1.51E-01</b>
Offsite							
	Hauling	2.21E-03	0.0718	0.0149	1.80E-04	3.89E-03	1.26E-03
	Vendor	0	0	0	0.00E+00	0	0
	Worker	0.0221	0.0167	0.216	5.00E-04	0.0416	0.0114
	Total	<b>0.0243</b>	<b>0.0885</b>	<b>0.2309</b>	<b>6.80E-04</b>	<b>0.0455</b>	<b>0.0126</b>
<b>TOTAL</b>		<b>1.0723</b>	<b>2.0943</b>	<b>2.0851</b>	<b>0.0037</b>	<b>0.1961</b>	<b>0.1632</b>

Architectural Coating Winter							
		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	2018						
	Archit. Coating	0.7493				0	0
	Off-Road	0.2986	2.0058	1.8542	2.97E-03	1.51E-01	1.51E-01
	Total	<b>1.048</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.97E-03</b>	<b>1.51E-01</b>	<b>1.51E-01</b>
Offsite							
	Hauling	2.26E-03	0.0728	0.0159	1.80E-04	3.90E-03	1.27E-03
	Vendor	0	0	0	0.00E+00	0	0
	Worker	0.0245	0.0185	0.1989	4.70E-04	0.0416	0.0114
	Total	<b>0.0267</b>	<b>0.0913</b>	<b>0.2148</b>	<b>6.50E-04</b>	<b>0.0455</b>	<b>0.0126</b>
<b>TOTAL</b>		<b>1.0747</b>	<b>2.0971</b>	<b>2.0690</b>	<b>0.0036</b>	<b>0.1961</b>	<b>0.1632</b>

<b>MAX DAILY</b>	<b>1.54</b>	<b>36.38</b>	<b>26.12</b>	<b>0.12</b>	<b>8.00</b>	<b>4.37</b>
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<b>Regional Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
Exceeds Thresholds?	No	No	No	No	No	No

## Localized Construction Emissions Worksheet

### Asphalt Demolition

		NOx	CO	PM10 Total	PM2.5 Total
Onsite					
	<b>2019</b>				
	Fugitive Dust	0	0	0	0
	Off-Road	2.0032	23.2798	0.0616	0.0616
	Total	2.0032	23.2798	0.0616	0.0616
1 Acre LSTs		80	498	4.00	3.00
Exceed Thresholds?		No	No	No	No

### Asphalt Demo Haul

		NOx	CO	PM10 Total	PM2.5 Total
Onsite					
	<b>2019</b>				
	Fugitive Dust	0	0	0.1445	0.0219
	Off-Road	0	0	0	0
	Total	0	0	0.1445	0.0219

<b>Demo + Haul</b>	<b>2.0032</b>	<b>23.2798</b>	<b>0.2061</b>	<b>0.0835</b>
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1 Acre LSTs	80	498	4.00	3.00
Exceed Thresholds?	No	No	No	No

### Site Preparation

		NOx	CO	PM10 Total	PM2.5 Total
Onsite					
	<b>2019</b>				
	Fugitive Dust	0	0	7.7233	4.2454
	Off-Road	2.0175	20.869	0.0621	0.0621
	Total	2.0175	20.869	7.7854	4.3075
3.5-Acre LSTs		143	1,110	10.49	6.00
Exceed Thresholds?		No	No	No	No

**Grading**

		NOx	CO	PM10 Total	PM2.5 Total
Onsite		<b>2019</b>			
	Fugitive Dust	0	0	2.8011	1.4396
	Off-Road	1.5737	17.7527	0.0484	0.0484
	Total	1.5737	17.7527	2.8495	1.488

**Grading Haul**

		NOx	CO	PM10 Total	PM2.5 Total
Onsite		<b>2019</b>			
	Fugitive Dust	0	0	0.0404	0.00612
	Off-Road	0	0	0	0
	Total	0	0	0.0404	0.00612

<b>Grading + Haul</b>	<b>1.5737</b>	<b>17.7527</b>	<b>2.8899</b>	<b>1.4941</b>
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2.5-Acre LSTs	124	894	8.16	4.67
Exceed Thresholds?	No	No	No	No

**Utility Trenching**

		NOx	CO	PM10 Total	PM2.5 Total
Onsite		<b>2019</b>			
	Off-Road	0.3292	4.6841	0.0101	0.0101
	Total	0.3292	4.6841	0.0101	0.0101

1-Acre LSTs	80	498	4.00	3.00
Exceed Thresholds?	No	No	No	No

**Asphalt Paving**

		NOx	CO	PM10 Total	PM2.5 Total
Onsite		<b>2020</b>			
	Off-Road	1.5032	13.9949	0.051	0.051
	Paving	0	0	0	0
	Total	1.5032	13.9949	0.051	0.051

1-Acre LSTs	80	498	4.00	3.00
Exceed Thresholds?	No	No	No	No

**Lighting Installation**

		NOx	CO	PM10 Total	PM2.5 Total
Onsite		<b>2019</b>			
	Off-Road	0.7082	6.3457	0.0218	0.0218
	Total	0.7082	6.3457	0.0218	0.0218

<b>Paving + Lighting Installation</b>	<b>2.2114</b>	<b>20.3406</b>	<b>0.0728</b>	<b>0.0728</b>
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1-Acre LSTs	80	498	4.00	3.00
Exceed Thresholds?	No	No	No	No

**Architectural Coating**

		NOx	CO	PM10 Total	PM2.5 Total
Onsite		<b>2020</b>			
	Archit. Coating	0	0	0	0
	Off-Road	2.0058	1.8542	0.1506	0.1506
	Total	2.0058	1.8542	0.1506	0.1506

1-Acre LSTs	80	498	4.00	3.00
Exceed Thresholds?	No	No	No	No

## Regional Operational Emissions Worksheet

Summer	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	0.053	1.60E-04	0.0174	0.00E+00	6.00E-05	6.00E-05
Energy	5.10E-04	4.61E-03	3.87E-03	3.00E-05	3.50E-04	3.50E-04
Mobile	0.5396	0.8452	7.7641	0.02	1.7928	0.4859
<b>Total</b>	<b>0.593</b>	<b>0.8499</b>	<b>7.7853</b>	<b>0.02</b>	<b>1.7932</b>	<b>0.4864</b>

Winter	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	0.053	1.60E-04	0.0174	0.00E+00	6.00E-05	6.00E-05
Energy	5.10E-04	4.61E-03	3.87E-03	3.00E-05	3.50E-04	3.50E-04
Mobile	0.5228	0.9079	7.3005	0.0188	1.7928	0.486
<b>Total</b>	<b>0.5763</b>	<b>0.9127</b>	<b>7.3217</b>	<b>0.0189</b>	<b>1.7932</b>	<b>0.4864</b>

Max Daily	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	0.053	0.000	0.017	0.000	0.000	0.000
Energy	0.001	0.005	0.004	0.000	0.000	0.000
Mobile	0.540	0.908	7.764	0.020	1.793	0.486
<b>Total</b>	<b>0.593</b>	<b>0.913</b>	<b>7.785</b>	<b>0.020</b>	<b>1.793</b>	<b>0.486</b>

<b>Regional Thresholds</b>	<b>55</b>	<b>55</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>550</b>
Exceeds Thresholds?	No	No	No	No	No	No

## Localized Operational Emissions Worksheet

Max Daily	NOx	CO	PM10 Total	PM2.5 Total
Area	0.000	0.017	0.000	0.000
Energy	0.005	0.004	0.000	0.000
<b>Total</b>	<b>0.005</b>	<b>0.021</b>	<b>0.000</b>	<b>0.000</b>

LSTs	<b>172</b>	<b>1,434</b>	<b>4.00</b>	<b>2.00</b>
Exceeds Thresholds?	No	No	No	No

## GHG Emissions Worksheet

MTons Total		
2019 Construction	176	
Amortized Emissions	6	
Source	MTons/Year	Percent of Total
Area	0.004	0.002%
Energy	3	1%
<i>Stadium Lighting</i>	<i>10</i>	<i>4%</i>
Mobile	264	93%
Waste	0	0
Water	0.2	0.001
Amortized Construction Emissions*	6	2%
Total All Sectors	283	100%

## Wilson Middle School Construction - Los Angeles-South Coast County, Annual

## Wilson Middle School Construction

### Los Angeles-South Coast County, Annual

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	42.15	1000sqft	1.01	42,145.00	0
Other Non-Asphalt Surfaces	123.92	1000sqft	2.84	0.00	0

### 1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	12			Operational Year	2019
Utility Company	User Defined				
CO2 Intensity (lb/MW hr)	383.88	CH4 Intensity (lb/MW hr)	0.095	N2O Intensity (lb/MW hr)	0.012

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - \*\*City of Glendale Power Mix from California Department of Energy. Utility Annual Power Content Labels for 2016. 2016 City of Glendale Power Content Label <http://www.sce.com/energy/labels/>

Land Use - See CalEEMod Assumptions

Construction Phase - See CalEEMod Assumptions

Off-road Equipment -

Off-road Equipment - Haul

Off-road Equipment - Haul

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - See CalEEMod Assumptions

Off-road Equipment - See CalEEMod Assumptions

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - CalEEMod assumptions

Trips and VMT - See CalEEMod Assumptions

Demolition -

Grading -

Architectural Coating - See CalEEMod Assumptions

Vehicle Trips -

Construction Off-road Equipment Mitigation - See CalEEMod Assumptions

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	0.00	823.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	0.00	2,468.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	8.00	16.00
tblConstructionPhase	NumDays	8.00	16.00
tblConstructionPhase	NumDays	230.00	18.00
tblGrading	MaterialExported	0.00	13,381.00
tblLandUse	LandUseSquareFeet	42,150.00	42,145.00
tblLandUse	LandUseSquareFeet	123,920.00	0.00
tblLandUse	LotAcreage	0.97	1.01
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00



tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	CH4IntensityFactor	0	0.095
tblProjectCharacteristics	CO2IntensityFactor	0	383.88
tblProjectCharacteristics	N2OIntensityFactor	0	0.012
tblTripsAndVMT	HaulingTripNumber	31.00	32.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00

## 2.0 Emissions Summary

### 2.1 Overall Construction

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.1234	1.3788	0.7154	1.8700e-003	0.1252	0.0571	0.1823	0.0588	0.0530	0.1117	0.0000	174.8133	174.8133	0.0332	0.0000	175.6442
Maximum	0.1234	1.3788	0.7154	1.8700e-003	0.1252	0.0571	0.1823	0.0588	0.0530	0.1117	0.0000	174.8133	174.8133	0.0332	0.0000	175.6442

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.1234	1.3788	0.7154	1.8700e-003	0.0653	0.0571	0.1224	0.0284	0.0530	0.0813	0.0000	174.8132	174.8132	0.0332	0.0000	175.6441
Maximum	0.1234	1.3788	0.7154	1.8700e-003	0.0653	0.0571	0.1224	0.0284	0.0530	0.0813	0.0000	174.8132	174.8132	0.0332	0.0000	175.6441

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	47.85	0.00	32.86	51.73	0.00	27.21	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2018	8-31-2018	1.7205	1.7205
2	9-1-2018	9-30-2018	0.0294	0.0294
		Highest	1.7205	1.7205

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Demo	Demolition	6/1/2018	6/28/2018	5	20	
2	Asphalt Demo Haul	Demolition	6/1/2018	6/28/2018	5	20	
3	Site Preparation	Site Preparation	6/29/2018	7/5/2018	5	5	
4	Grading	Grading	7/6/2018	7/27/2018	5	16	
5	Grading Haul	Grading	7/6/2018	7/27/2018	5	16	
6	Trenching	Trenching	7/28/2018	8/6/2018	5	6	
7	Landscaping & Field Lighting	Building Construction	8/7/2018	8/30/2018	5	18	
8	Paving	Paving	8/7/2018	8/30/2018	5	18	
9	Architectural Coating	Architectural Coating	9/1/2018	9/26/2018	5	18	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 8**

**Acres of Paving: 3.85**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,468; Non-Residential Outdoor: 823; Striped Parking Area: 2,529**

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Asphalt Demo	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt Demo	Excavators	3	8.00	158	0.38
Asphalt Demo	Rubber Tired Dozers	2	8.00	247	0.40
Asphalt Demo Haul	Concrete/Industrial Saws	0	8.00	81	0.73
Asphalt Demo Haul	Excavators	0	8.00	158	0.38
Asphalt Demo Haul	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38

Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading Haul	Excavators	0	8.00	158	0.38
Grading Haul	Graders	0	8.00	187	0.41
Grading Haul	Rubber Tired Dozers	0	8.00	247	0.40
Grading Haul	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Landscaping & Field Lighting	Cranes	1	8.00	231	0.29
Landscaping & Field Lighting	Forklifts	1	6.00	89	0.20
Landscaping & Field Lighting	Generator Sets	0	8.00	84	0.74
Landscaping & Field Lighting	Rubber Tired Dozers	1	6.00	247	0.40
Landscaping & Field Lighting	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Landscaping & Field Lighting	Welders	0	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Asphalt Demo	6	15.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Demo Haul	0	0.00	0.00	32.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading Haul	0	0.00	0.00	1,673.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping & Field Lighting	3	18.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	4.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Replace Ground Cover
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads
- Clean Paved Roads

### 3.2 Asphalt Demo - 2018

#### 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0372	0.3832	0.2230	3.9000e-004		0.0194	0.0194		0.0181	0.0181	0.0000	35.1241	35.1241	9.6800e-003	0.0000	35.3660
<b>Total</b>	<b>0.0372</b>	<b>0.3832</b>	<b>0.2230</b>	<b>3.9000e-004</b>	<b>0.0000</b>	<b>0.0194</b>	<b>0.0194</b>	<b>0.0000</b>	<b>0.0181</b>	<b>0.0181</b>	<b>0.0000</b>	<b>35.1241</b>	<b>35.1241</b>	<b>9.6800e-003</b>	<b>0.0000</b>	<b>35.3660</b>

#### 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	1.9000e-004	5.0100e-003	1.4100e-003	1.0000e-005	2.5000e-004	3.0000e-005	2.9000e-004	7.0000e-005	3.0000e-005	1.1000e-004	0.0000	1.0107	1.0107	7.0000e-005	0.0000	1.0124
Worker	8.3000e-004	7.1000e-004	7.6500e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.6332	1.6332	6.0000e-005	0.0000	1.6347
<b>Total</b>	<b>1.0200e-003</b>	<b>5.7200e-003</b>	<b>9.0600e-003</b>	<b>3.0000e-005</b>	<b>1.8900e-003</b>	<b>4.0000e-005</b>	<b>1.9500e-003</b>	<b>5.1000e-004</b>	<b>4.0000e-005</b>	<b>5.6000e-004</b>	<b>0.0000</b>	<b>2.6439</b>	<b>2.6439</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>2.6471</b>

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0372	0.3832	0.2230	3.9000e-004		0.0194	0.0194		0.0181	0.0181	0.0000	35.1240	35.1240	9.6800e-003	0.0000	35.3660
Total	0.0372	0.3832	0.2230	3.9000e-004	0.0000	0.0194	0.0194	0.0000	0.0181	0.0181	0.0000	35.1240	35.1240	9.6800e-003	0.0000	35.3660

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	1.9000e-004	5.0100e-003	1.4100e-003	1.0000e-005	2.4000e-004	3.0000e-005	2.7000e-004	7.0000e-005	3.0000e-005	1.0000e-004	0.0000	1.0107	1.0107	7.0000e-005	0.0000	1.0124
Worker	8.3000e-004	7.1000e-004	7.6500e-003	2.0000e-005	1.5200e-003	1.0000e-005	1.5300e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.6332	1.6332	6.0000e-005	0.0000	1.6347
Total	1.0200e-003	5.7200e-003	9.0600e-003	3.0000e-005	1.7600e-003	4.0000e-005	1.8000e-003	4.8000e-004	4.0000e-005	5.2000e-004	0.0000	2.6439	2.6439	1.3000e-004	0.0000	2.6471

### 3.3 Asphalt Demo Haul - 2018

#### 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					3.3800e-003	0.0000	3.3800e-003	5.1000e-004	0.0000	5.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>3.3800e-003</b>	<b>0.0000</b>	<b>3.3800e-003</b>	<b>5.1000e-004</b>	<b>0.0000</b>	<b>5.1000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

#### 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	1.6000e-004	5.3400e-003	1.1000e-003	1.0000e-005	2.7000e-004	2.0000e-005	2.9000e-004	8.0000e-005	2.0000e-005	9.0000e-005	0.0000	1.2620	1.2620	9.0000e-005	0.0000	1.2642
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>1.6000e-004</b>	<b>5.3400e-003</b>	<b>1.1000e-003</b>	<b>1.0000e-005</b>	<b>2.7000e-004</b>	<b>2.0000e-005</b>	<b>2.9000e-004</b>	<b>8.0000e-005</b>	<b>2.0000e-005</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>1.2620</b>	<b>1.2620</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>1.2642</b>



Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.4500e-003	0.0000	1.4500e-003	2.2000e-004	0.0000	2.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	1.4500e-003	0.0000	1.4500e-003	2.2000e-004	0.0000	2.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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	1.6000e-004	5.3400e-003	1.1000e-003	1.0000e-005	2.6000e-004	2.0000e-005	2.8000e-004	7.0000e-005	2.0000e-005	9.0000e-005	0.0000	1.2620	1.2620	9.0000e-005	0.0000	1.2642
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.6000e-004	5.3400e-003	1.1000e-003	1.0000e-005	2.6000e-004	2.0000e-005	2.8000e-004	7.0000e-005	2.0000e-005	9.0000e-005	0.0000	1.2620	1.2620	9.0000e-005	0.0000	1.2642

### 3.4 Site Preparation - 2018

#### 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					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0114	0.1205	0.0562	1.0000e-004		6.4400e-003	6.4400e-003		5.9300e-003	5.9300e-003	0.0000	8.6900	8.6900	2.7100e-003	0.0000	8.7576
<b>Total</b>	<b>0.0114</b>	<b>0.1205</b>	<b>0.0562</b>	<b>1.0000e-004</b>	<b>0.0452</b>	<b>6.4400e-003</b>	<b>0.0516</b>	<b>0.0248</b>	<b>5.9300e-003</b>	<b>0.0308</b>	<b>0.0000</b>	<b>8.6900</b>	<b>8.6900</b>	<b>2.7100e-003</b>	<b>0.0000</b>	<b>8.7576</b>

#### 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	5.0000e-005	1.2500e-003	3.5000e-004	0.0000	6.0000e-005	1.0000e-005	7.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.2527	0.2527	2.0000e-005	0.0000	0.2531
Worker	2.5000e-004	2.1000e-004	2.2900e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.4000e-004	0.0000	0.4900	0.4900	2.0000e-005	0.0000	0.4904
<b>Total</b>	<b>3.0000e-004</b>	<b>1.4600e-003</b>	<b>2.6400e-003</b>	<b>1.0000e-005</b>	<b>5.5000e-004</b>	<b>1.0000e-005</b>	<b>5.7000e-004</b>	<b>1.5000e-004</b>	<b>1.0000e-005</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>0.7426</b>	<b>0.7426</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.7435</b>

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0193	0.0000	0.0193	0.0106	0.0000	0.0106	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0114	0.1205	0.0562	1.0000e-004		6.4400e-003	6.4400e-003		5.9300e-003	5.9300e-003	0.0000	8.6900	8.6900	2.7100e-003	0.0000	8.7576
Total	0.0114	0.1205	0.0562	1.0000e-004	0.0193	6.4400e-003	0.0258	0.0106	5.9300e-003	0.0165	0.0000	8.6900	8.6900	2.7100e-003	0.0000	8.7576

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	5.0000e-005	1.2500e-003	3.5000e-004	0.0000	6.0000e-005	1.0000e-005	7.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.2527	0.2527	2.0000e-005	0.0000	0.2531
Worker	2.5000e-004	2.1000e-004	2.2900e-003	1.0000e-005	4.5000e-004	0.0000	4.6000e-004	1.2000e-004	0.0000	1.3000e-004	0.0000	0.4900	0.4900	2.0000e-005	0.0000	0.4904
Total	3.0000e-004	1.4600e-003	2.6400e-003	1.0000e-005	5.1000e-004	1.0000e-005	5.3000e-004	1.4000e-004	1.0000e-005	1.6000e-004	0.0000	0.7426	0.7426	4.0000e-005	0.0000	0.7435

### 3.5 Grading - 2018

#### 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					0.0524	0.0000	0.0524	0.0269	0.0000	0.0269	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0222	0.2454	0.1326	2.4000e-004		0.0124	0.0124		0.0114	0.0114	0.0000	21.6855	21.6855	6.7500e-003	0.0000	21.8543
<b>Total</b>	<b>0.0222</b>	<b>0.2454</b>	<b>0.1326</b>	<b>2.4000e-004</b>	<b>0.0524</b>	<b>0.0124</b>	<b>0.0648</b>	<b>0.0269</b>	<b>0.0114</b>	<b>0.0384</b>	<b>0.0000</b>	<b>21.6855</b>	<b>21.6855</b>	<b>6.7500e-003</b>	<b>0.0000</b>	<b>21.8543</b>

#### 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	1.5000e-004	4.0100e-003	1.1300e-003	1.0000e-005	2.0000e-004	3.0000e-005	2.3000e-004	6.0000e-005	3.0000e-005	8.0000e-005	0.0000	0.8085	0.8085	6.0000e-005	0.0000	0.8099
Worker	6.6000e-004	5.7000e-004	6.1200e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.3066	1.3066	5.0000e-005	0.0000	1.3078
<b>Total</b>	<b>8.1000e-004</b>	<b>4.5800e-003</b>	<b>7.2500e-003</b>	<b>2.0000e-005</b>	<b>1.5100e-003</b>	<b>4.0000e-005</b>	<b>1.5600e-003</b>	<b>4.1000e-004</b>	<b>4.0000e-005</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>2.1151</b>	<b>2.1151</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>2.1177</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0224	0.0000	0.0224	0.0115	0.0000	0.0115	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0222	0.2454	0.1326	2.4000e-004		0.0124	0.0124		0.0114	0.0114	0.0000	21.6855	21.6855	6.7500e-003	0.0000	21.8543
Total	0.0222	0.2454	0.1326	2.4000e-004	0.0224	0.0124	0.0348	0.0115	0.0114	0.0229	0.0000	21.6855	21.6855	6.7500e-003	0.0000	21.8543

**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	1.5000e-004	4.0100e-003	1.1300e-003	1.0000e-005	1.9000e-004	3.0000e-005	2.2000e-004	6.0000e-005	3.0000e-005	8.0000e-005	0.0000	0.8085	0.8085	6.0000e-005	0.0000	0.8099
Worker	6.6000e-004	5.7000e-004	6.1200e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.4000e-004	0.0000	1.3066	1.3066	5.0000e-005	0.0000	1.3078
Total	8.1000e-004	4.5800e-003	7.2500e-003	2.0000e-005	1.4000e-003	4.0000e-005	1.4400e-003	3.8000e-004	4.0000e-005	4.2000e-004	0.0000	2.1151	2.1151	1.1000e-004	0.0000	2.1177

### 3.6 Grading Haul - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.6000e-004	0.0000	7.6000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>7.6000e-004</b>	<b>0.0000</b>	<b>7.6000e-004</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

#### 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	8.3900e-003	0.2794	0.0576	6.7000e-004	0.0144	1.0400e-003	0.0154	3.9500e-003	9.9000e-004	4.9400e-003	0.0000	65.9799	65.9799	4.6500e-003	0.0000	66.0963
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>8.3900e-003</b>	<b>0.2794</b>	<b>0.0576</b>	<b>6.7000e-004</b>	<b>0.0144</b>	<b>1.0400e-003</b>	<b>0.0154</b>	<b>3.9500e-003</b>	<b>9.9000e-004</b>	<b>4.9400e-003</b>	<b>0.0000</b>	<b>65.9799</b>	<b>65.9799</b>	<b>4.6500e-003</b>	<b>0.0000</b>	<b>66.0963</b>

### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.2000e-004	0.0000	3.2000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	3.2000e-004	0.0000	3.2000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

### 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	8.3900e-003	0.2794	0.0576	6.7000e-004	0.0134	1.0400e-003	0.0144	3.7100e-003	9.9000e-004	4.7000e-003	0.0000	65.9799	65.9799	4.6500e-003	0.0000	66.0963
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	8.3900e-003	0.2794	0.0576	6.7000e-004	0.0134	1.0400e-003	0.0144	3.7100e-003	9.9000e-004	4.7000e-003	0.0000	65.9799	65.9799	4.6500e-003	0.0000	66.0963

### 3.7 Trenching - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6000e-003	0.0158	0.0140	2.0000e-005		1.1200e-003	1.1200e-003		1.0300e-003	1.0300e-003	0.0000	1.7025	1.7025	5.3000e-004	0.0000	1.7157
<b>Total</b>	<b>1.6000e-003</b>	<b>0.0158</b>	<b>0.0140</b>	<b>2.0000e-005</b>		<b>1.1200e-003</b>	<b>1.1200e-003</b>		<b>1.0300e-003</b>	<b>1.0300e-003</b>	<b>0.0000</b>	<b>1.7025</b>	<b>1.7025</b>	<b>5.3000e-004</b>	<b>0.0000</b>	<b>1.7157</b>

#### 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	6.0000e-005	1.5000e-003	4.2000e-004	0.0000	8.0000e-005	1.0000e-005	9.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.3032	0.3032	2.0000e-005	0.0000	0.3037
Worker	8.0000e-005	7.0000e-005	7.6000e-004	0.0000	1.6000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	5.0000e-005	0.0000	0.1633	0.1633	1.0000e-005	0.0000	0.1635
<b>Total</b>	<b>1.4000e-004</b>	<b>1.5700e-003</b>	<b>1.1800e-003</b>	<b>0.0000</b>	<b>2.4000e-004</b>	<b>1.0000e-005</b>	<b>2.6000e-004</b>	<b>6.0000e-005</b>	<b>1.0000e-005</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>0.4665</b>	<b>0.4665</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.4672</b>



Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6000e-003	0.0158	0.0140	2.0000e-005		1.1200e-003	1.1200e-003		1.0300e-003	1.0300e-003	0.0000	1.7025	1.7025	5.3000e-004	0.0000	1.7157
Total	1.6000e-003	0.0158	0.0140	2.0000e-005		1.1200e-003	1.1200e-003		1.0300e-003	1.0300e-003	0.0000	1.7025	1.7025	5.3000e-004	0.0000	1.7157

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	6.0000e-005	1.5000e-003	4.2000e-004	0.0000	7.0000e-005	1.0000e-005	8.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.3032	0.3032	2.0000e-005	0.0000	0.3037
Worker	8.0000e-005	7.0000e-005	7.6000e-004	0.0000	1.5000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1633	0.1633	1.0000e-005	0.0000	0.1635
Total	1.4000e-004	1.5700e-003	1.1800e-003	0.0000	2.2000e-004	1.0000e-005	2.3000e-004	6.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.4665	0.4665	3.0000e-005	0.0000	0.4672

### 3.8 Landscaping & Field Lighting - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0142	0.1568	0.0604	1.2000e-004		7.6300e-003	7.6300e-003		7.0200e-003	7.0200e-003	0.0000	10.9494	10.9494	3.4100e-003	0.0000	11.0346
<b>Total</b>	<b>0.0142</b>	<b>0.1568</b>	<b>0.0604</b>	<b>1.2000e-004</b>		<b>7.6300e-003</b>	<b>7.6300e-003</b>		<b>7.0200e-003</b>	<b>7.0200e-003</b>	<b>0.0000</b>	<b>10.9494</b>	<b>10.9494</b>	<b>3.4100e-003</b>	<b>0.0000</b>	<b>11.0346</b>

#### 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	3.0000e-004	7.8900e-003	2.2200e-003	2.0000e-005	4.0000e-004	5.0000e-005	4.5000e-004	1.1000e-004	5.0000e-005	1.7000e-004	0.0000	1.5918	1.5918	1.1000e-004	0.0000	1.5945
Worker	9.0000e-004	7.7000e-004	8.2600e-003	2.0000e-005	1.7800e-003	2.0000e-005	1.7900e-003	4.7000e-004	1.0000e-005	4.9000e-004	0.0000	1.7639	1.7639	7.0000e-005	0.0000	1.7655
<b>Total</b>	<b>1.2000e-003</b>	<b>8.6600e-003</b>	<b>0.0105</b>	<b>4.0000e-005</b>	<b>2.1800e-003</b>	<b>7.0000e-005</b>	<b>2.2400e-003</b>	<b>5.8000e-004</b>	<b>6.0000e-005</b>	<b>6.6000e-004</b>	<b>0.0000</b>	<b>3.3557</b>	<b>3.3557</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>3.3600</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0142	0.1568	0.0604	1.2000e-004		7.6300e-003	7.6300e-003		7.0200e-003	7.0200e-003	0.0000	10.9494	10.9494	3.4100e-003	0.0000	11.0346
Total	0.0142	0.1568	0.0604	1.2000e-004		7.6300e-003	7.6300e-003		7.0200e-003	7.0200e-003	0.0000	10.9494	10.9494	3.4100e-003	0.0000	11.0346

**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	3.0000e-004	7.8900e-003	2.2200e-003	2.0000e-005	3.7000e-004	5.0000e-005	4.3000e-004	1.1000e-004	5.0000e-005	1.6000e-004	0.0000	1.5918	1.5918	1.1000e-004	0.0000	1.5945
Worker	9.0000e-004	7.7000e-004	8.2600e-003	2.0000e-005	1.6400e-003	2.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.7639	1.7639	7.0000e-005	0.0000	1.7655
Total	1.2000e-003	8.6600e-003	0.0105	4.0000e-005	2.0100e-003	7.0000e-005	2.0800e-003	5.5000e-004	6.0000e-005	6.1000e-004	0.0000	3.3557	3.3557	1.8000e-004	0.0000	3.3600

### 3.9 Paving - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0128	0.1307	0.1119	1.7000e-004		7.5300e-003	7.5300e-003		6.9500e-003	6.9500e-003	0.0000	15.2887	15.2887	4.6300e-003	0.0000	15.4045
Paving	1.3200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0141</b>	<b>0.1307</b>	<b>0.1119</b>	<b>1.7000e-004</b>		<b>7.5300e-003</b>	<b>7.5300e-003</b>		<b>6.9500e-003</b>	<b>6.9500e-003</b>	<b>0.0000</b>	<b>15.2887</b>	<b>15.2887</b>	<b>4.6300e-003</b>	<b>0.0000</b>	<b>15.4045</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-003	8.5000e-004	9.1800e-003	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	2.0000e-005	5.4000e-004	0.0000	1.9598	1.9598	7.0000e-005	0.0000	1.9617
<b>Total</b>	<b>1.0000e-003</b>	<b>8.5000e-004</b>	<b>9.1800e-003</b>	<b>2.0000e-005</b>	<b>1.9700e-003</b>	<b>2.0000e-005</b>	<b>1.9900e-003</b>	<b>5.2000e-004</b>	<b>2.0000e-005</b>	<b>5.4000e-004</b>	<b>0.0000</b>	<b>1.9598</b>	<b>1.9598</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>1.9617</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0128	0.1307	0.1119	1.7000e-004		7.5300e-003	7.5300e-003		6.9500e-003	6.9500e-003	0.0000	15.2887	15.2887	4.6300e-003	0.0000	15.4045
Paving	1.3200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0141	0.1307	0.1119	1.7000e-004		7.5300e-003	7.5300e-003		6.9500e-003	6.9500e-003	0.0000	15.2887	15.2887	4.6300e-003	0.0000	15.4045

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-003	8.5000e-004	9.1800e-003	2.0000e-005	1.8200e-003	2.0000e-005	1.8400e-003	4.9000e-004	2.0000e-005	5.0000e-004	0.0000	1.9598	1.9598	7.0000e-005	0.0000	1.9617
Total	1.0000e-003	8.5000e-004	9.1800e-003	2.0000e-005	1.8200e-003	2.0000e-005	1.8400e-003	4.9000e-004	2.0000e-005	5.0000e-004	0.0000	1.9598	1.9598	7.0000e-005	0.0000	1.9617

### 3.10 Architectural Coating - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	6.7400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6900e-003	0.0181	0.0167	3.0000e-005		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	2.2979	2.2979	2.2000e-004	0.0000	2.3034
<b>Total</b>	<b>9.4300e-003</b>	<b>0.0181</b>	<b>0.0167</b>	<b>3.0000e-005</b>		<b>1.3500e-003</b>	<b>1.3500e-003</b>		<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>0.0000</b>	<b>2.2979</b>	<b>2.2979</b>	<b>2.2000e-004</b>	<b>0.0000</b>	<b>2.3034</b>

#### 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	2.0000e-005	6.7000e-004	1.4000e-004	0.0000	3.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1578	0.1578	1.0000e-005	0.0000	0.1580
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	2.0000e-004	1.7000e-004	1.8400e-003	0.0000	3.9000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3920	0.3920	1.0000e-005	0.0000	0.3923
<b>Total</b>	<b>2.2000e-004</b>	<b>8.4000e-004</b>	<b>1.9800e-003</b>	<b>0.0000</b>	<b>4.2000e-004</b>	<b>0.0000</b>	<b>4.4000e-004</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>0.5497</b>	<b>0.5497</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.5504</b>

### 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	6.7400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6900e-003	0.0181	0.0167	3.0000e-005		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	2.2979	2.2979	2.2000e-004	0.0000	2.3034
Total	9.4300e-003	0.0181	0.0167	3.0000e-005		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	2.2979	2.2979	2.2000e-004	0.0000	2.3034

### 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	2.0000e-005	6.7000e-004	1.4000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1578	0.1578	1.0000e-005	0.0000	0.1580
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	2.0000e-004	1.7000e-004	1.8400e-003	0.0000	3.6000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3920	0.3920	1.0000e-005	0.0000	0.3923
Total	2.2000e-004	8.4000e-004	1.9800e-003	0.0000	3.9000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.5497	0.5497	2.0000e-005	0.0000	0.5504

Wilson Middle School Construction - Los Angeles-South Coast County, Summer

## Wilson Middle School Construction

### Los Angeles-South Coast County, Summer

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	42.15	1000sqft	1.01	42,145.00	0
Other Non-Asphalt Surfaces	123.92	1000sqft	2.84	0.00	0

### 1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	12			Operational Year	2019
Utility Company	User Defined				
CO2 Intensity (lb/MW hr)	383.88	CH4 Intensity (lb/MW hr)	0.095	N2O Intensity (lb/MW hr)	0.012

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - \*\*City of Glendale Power Mix from California Department of Energy. Utility Annual Power Content Labels for 2016. 2016 City of Glendale Power Content Label <http://www.energy.ca.gov/data/labels/>

Land Use - See CalEEMod Assumptions

Construction Phase - See CalEEMod Assumptions

Off-road Equipment -

Off-road Equipment - Haul

Off-road Equipment - Haul

Off-road Equipment -

Off-road Equipment -



Off-road Equipment - See CalEEMod Assumptions

Off-road Equipment - See CalEEMod Assumptions

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - CalEEMod assumptions

Trips and VMT - See CalEEMod Assumptions

Demolition -

Grading -

Architectural Coating - See CalEEMod Assumptions

Vehicle Trips -

Construction Off-road Equipment Mitigation - See CalEEMod Assumptions

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	0.00	823.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	0.00	2,468.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	8.00	16.00
tblConstructionPhase	NumDays	8.00	16.00
tblConstructionPhase	NumDays	230.00	18.00
tblGrading	MaterialExported	0.00	13,381.00
tblLandUse	LandUseSquareFeet	42,150.00	42,145.00
tblLandUse	LandUseSquareFeet	123,920.00	0.00
tblLandUse	LotAcreage	0.97	1.01
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	CH4IntensityFactor	0	0.095
tblProjectCharacteristics	CO2IntensityFactor	0	383.88
tblProjectCharacteristics	N2OIntensityFactor	0	0.012
tblTripsAndVMT	HaulingTripNumber	31.00	32.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	4.6806	65.0057	24.5108	0.1174	18.2931	2.5822	20.8752	9.9914	2.3757	12.3671	0.0000	12,444.3917	12,444.3917	1.5750	0.0000	12,483.7660
<b>Maximum</b>	<b>4.6806</b>	<b>65.0057</b>	<b>24.5108</b>	<b>0.1174</b>	<b>18.2931</b>	<b>2.5822</b>	<b>20.8752</b>	<b>9.9914</b>	<b>2.3757</b>	<b>12.3671</b>	<b>0.0000</b>	<b>12,444.3917</b>	<b>12,444.3917</b>	<b>1.5750</b>	<b>0.0000</b>	<b>12,483.7660</b>

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	4.6806	65.0057	24.5108	0.1174	7.9328	2.5822	10.5149	4.3018	2.3757	6.6776	0.0000	12,444.3917	12,444.3917	1.5750	0.0000	12,483.7660
Maximum	4.6806	65.0057	24.5108	0.1174	7.9328	2.5822	10.5149	4.3018	2.3757	6.6776	0.0000	12,444.3917	12,444.3917	1.5750	0.0000	12,483.7660

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	56.64	0.00	49.63	56.94	0.00	46.01	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

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#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Demo	Demolition	6/1/2018	6/28/2018	5	20	
2	Asphalt Demo Haul	Demolition	6/1/2018	6/28/2018	5	20	
3	Site Preparation	Site Preparation	6/29/2018	7/5/2018	5	5	
4	Grading	Grading	7/6/2018	7/27/2018	5	16	
5	Grading Haul	Grading	7/6/2018	7/27/2018	5	16	
6	Trenching	Trenching	7/28/2018	8/6/2018	5	6	
7	Landscaping & Field Lighting	Building Construction	8/7/2018	8/30/2018	5	18	
8	Paving	Paving	8/7/2018	8/30/2018	5	18	
9	Architectural Coating	Architectural Coating	9/1/2018	9/26/2018	5	18	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 8**

**Acres of Paving: 3.85**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,468; Non-Residential Outdoor: 823; Striped Parking Area: 2,529**

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Asphalt Demo	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt Demo	Excavators	3	8.00	158	0.38
Asphalt Demo	Rubber Tired Dozers	2	8.00	247	0.40
Asphalt Demo Haul	Concrete/Industrial Saws	0	8.00	81	0.73
Asphalt Demo Haul	Excavators	0	8.00	158	0.38
Asphalt Demo Haul	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading Haul	Excavators	0	8.00	158	0.38
Grading Haul	Graders	0	8.00	187	0.41
Grading Haul	Rubber Tired Dozers	0	8.00	247	0.40
Grading Haul	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Landscaping & Field Lighting	Cranes	1	8.00	231	0.29
Landscaping & Field Lighting	Forklifts	1	6.00	89	0.20
Landscaping & Field Lighting	Generator Sets	0	8.00	84	0.74
Landscaping & Field Lighting	Rubber Tired Dozers	1	6.00	247	0.40
Landscaping & Field Lighting	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Landscaping & Field Lighting	Welders	0	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Asphalt Demo	6	15.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Demo Haul	0	0.00	0.00	32.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading Haul	0	0.00	0.00	1,673.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping & Field Lighting	3	18.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	4.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Replace Ground Cover
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads
- Clean Paved Roads

### 3.2 Asphalt Demo - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.7190	38.3225	22.3040	0.0388		1.9386	1.9386		1.8048	1.8048		3,871.7665	3,871.7665	1.0667		3,898.4344
<b>Total</b>	<b>3.7190</b>	<b>38.3225</b>	<b>22.3040</b>	<b>0.0388</b>	<b>0.0000</b>	<b>1.9386</b>	<b>1.9386</b>	<b>0.0000</b>	<b>1.8048</b>	<b>1.8048</b>		<b>3,871.7665</b>	<b>3,871.7665</b>	<b>1.0667</b>		<b>3,898.4344</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4902	0.1340	1.0600e-003	0.0256	3.4500e-003	0.0291	7.3700e-003	3.3000e-003	0.0107		112.6718	112.6718	7.4200e-003		112.8572
Worker	0.0829	0.0625	0.8101	1.8900e-003	0.1677	1.4900e-003	0.1692	0.0445	1.3800e-003	0.0458		188.0535	188.0535	7.0500e-003		188.2298
<b>Total</b>	<b>0.1013</b>	<b>0.5528</b>	<b>0.9442</b>	<b>2.9500e-003</b>	<b>0.1933</b>	<b>4.9400e-003</b>	<b>0.1982</b>	<b>0.0518</b>	<b>4.6800e-003</b>	<b>0.0565</b>		<b>300.7252</b>	<b>300.7252</b>	<b>0.0145</b>		<b>301.0871</b>

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.7190	38.3225	22.3040	0.0388		1.9386	1.9386		1.8048	1.8048	0.0000	3,871.7665	3,871.7665	1.0667		3,898.4344
Total	3.7190	38.3225	22.3040	0.0388	0.0000	1.9386	1.9386	0.0000	1.8048	1.8048	0.0000	3,871.7665	3,871.7665	1.0667		3,898.4344

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4902	0.1340	1.0600e-003	0.0240	3.4500e-003	0.0274	6.9700e-003	3.3000e-003	0.0103		112.6718	112.6718	7.4200e-003		112.8572
Worker	0.0829	0.0625	0.8101	1.8900e-003	0.1546	1.4900e-003	0.1560	0.0413	1.3800e-003	0.0426		188.0535	188.0535	7.0500e-003		188.2298
Total	0.1013	0.5528	0.9442	2.9500e-003	0.1785	4.9400e-003	0.1835	0.0482	4.6800e-003	0.0529		300.7252	300.7252	0.0145		301.0871



### 3.3 Asphalt Demo Haul - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3381	0.0000	0.3381	0.0512	0.0000	0.0512			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.3381</b>	<b>0.0000</b>	<b>0.3381</b>	<b>0.0512</b>	<b>0.0000</b>	<b>0.0512</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0159	0.5169	0.1070	1.3000e-003	0.0280	1.9700e-003	0.0299	7.6700e-003	1.8800e-003	9.5500e-003		140.0983	140.0983	9.6400e-003		140.3395
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0159</b>	<b>0.5169</b>	<b>0.1070</b>	<b>1.3000e-003</b>	<b>0.0280</b>	<b>1.9700e-003</b>	<b>0.0299</b>	<b>7.6700e-003</b>	<b>1.8800e-003</b>	<b>9.5500e-003</b>		<b>140.0983</b>	<b>140.0983</b>	<b>9.6400e-003</b>		<b>140.3395</b>

### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1445	0.0000	0.1445	0.0219	0.0000	0.0219			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.1445</b>	<b>0.0000</b>	<b>0.1445</b>	<b>0.0219</b>	<b>0.0000</b>	<b>0.0219</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0159	0.5169	0.1070	1.3000e-003	0.0261	1.9700e-003	0.0280	7.2000e-003	1.8800e-003	9.0800e-003		140.0983	140.0983	9.6400e-003		140.3395
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0159</b>	<b>0.5169</b>	<b>0.1070</b>	<b>1.3000e-003</b>	<b>0.0261</b>	<b>1.9700e-003</b>	<b>0.0280</b>	<b>7.2000e-003</b>	<b>1.8800e-003</b>	<b>9.0800e-003</b>		<b>140.0983</b>	<b>140.0983</b>	<b>9.6400e-003</b>		<b>140.3395</b>

### 3.4 Site Preparation - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.5627	48.1988	22.4763	0.0380		2.5769	2.5769		2.3708	2.3708		3,831.6239	3,831.6239	1.1928		3,861.4448
<b>Total</b>	<b>4.5627</b>	<b>48.1988</b>	<b>22.4763</b>	<b>0.0380</b>	<b>18.0663</b>	<b>2.5769</b>	<b>20.6432</b>	<b>9.9307</b>	<b>2.3708</b>	<b>12.3014</b>		<b>3,831.6239</b>	<b>3,831.6239</b>	<b>1.1928</b>		<b>3,861.4448</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4902	0.1340	1.0600e-003	0.0256	3.4500e-003	0.0291	7.3700e-003	3.3000e-003	0.0107		112.6718	112.6718	7.4200e-003		112.8572
Worker	0.0995	0.0751	0.9721	2.2700e-003	0.2012	1.7900e-003	0.2030	0.0534	1.6500e-003	0.0550		225.6642	225.6642	8.4600e-003		225.8758
<b>Total</b>	<b>0.1179</b>	<b>0.5653</b>	<b>1.1062</b>	<b>3.3300e-003</b>	<b>0.2268</b>	<b>5.2400e-003</b>	<b>0.2321</b>	<b>0.0607</b>	<b>4.9500e-003</b>	<b>0.0657</b>		<b>338.3359</b>	<b>338.3359</b>	<b>0.0159</b>		<b>338.7330</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7233	0.0000	7.7233	4.2454	0.0000	4.2454			0.0000			0.0000
Off-Road	4.5627	48.1988	22.4763	0.0380		2.5769	2.5769		2.3708	2.3708	0.0000	3,831.6239	3,831.6239	1.1928		3,861.4448
Total	4.5627	48.1988	22.4763	0.0380	7.7233	2.5769	10.3002	4.2454	2.3708	6.6161	0.0000	3,831.6239	3,831.6239	1.1928		3,861.4448

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4902	0.1340	1.0600e-003	0.0240	3.4500e-003	0.0274	6.9700e-003	3.3000e-003	0.0103		112.6718	112.6718	7.4200e-003		112.8572
Worker	0.0995	0.0751	0.9721	2.2700e-003	0.1855	1.7900e-003	0.1873	0.0495	1.6500e-003	0.0512		225.6642	225.6642	8.4600e-003		225.8758
Total	0.1179	0.5653	1.1062	3.3300e-003	0.2094	5.2400e-003	0.2147	0.0565	4.9500e-003	0.0614		338.3359	338.3359	0.0159		338.7330

### 3.5 Grading - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.7733	30.6725	16.5770	0.0297		1.5513	1.5513		1.4272	1.4272		2,988.0216	2,988.0216	0.9302		3,011.2769
<b>Total</b>	<b>2.7733</b>	<b>30.6725</b>	<b>16.5770</b>	<b>0.0297</b>	<b>6.5523</b>	<b>1.5513</b>	<b>8.1037</b>	<b>3.3675</b>	<b>1.4272</b>	<b>4.7947</b>		<b>2,988.0216</b>	<b>2,988.0216</b>	<b>0.9302</b>		<b>3,011.2769</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4902	0.1340	1.0600e-003	0.0256	3.4500e-003	0.0291	7.3700e-003	3.3000e-003	0.0107		112.6718	112.6718	7.4200e-003		112.8572
Worker	0.0829	0.0625	0.8101	1.8900e-003	0.1677	1.4900e-003	0.1692	0.0445	1.3800e-003	0.0458		188.0535	188.0535	7.0500e-003		188.2298
<b>Total</b>	<b>0.1013</b>	<b>0.5528</b>	<b>0.9442</b>	<b>2.9500e-003</b>	<b>0.1933</b>	<b>4.9400e-003</b>	<b>0.1982</b>	<b>0.0518</b>	<b>4.6800e-003</b>	<b>0.0565</b>		<b>300.7252</b>	<b>300.7252</b>	<b>0.0145</b>		<b>301.0871</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8011	0.0000	2.8011	1.4396	0.0000	1.4396			0.0000			0.0000
Off-Road	2.7733	30.6725	16.5770	0.0297		1.5513	1.5513		1.4272	1.4272	0.0000	2,988.0216	2,988.0216	0.9302		3,011.2769
Total	2.7733	30.6725	16.5770	0.0297	2.8011	1.5513	4.3524	1.4396	1.4272	2.8668	0.0000	2,988.0216	2,988.0216	0.9302		3,011.2769

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4902	0.1340	1.0600e-003	0.0240	3.4500e-003	0.0274	6.9700e-003	3.3000e-003	0.0103		112.6718	112.6718	7.4200e-003		112.8572
Worker	0.0829	0.0625	0.8101	1.8900e-003	0.1546	1.4900e-003	0.1560	0.0413	1.3800e-003	0.0426		188.0535	188.0535	7.0500e-003		188.2298
Total	0.1013	0.5528	0.9442	2.9500e-003	0.1785	4.9400e-003	0.1835	0.0482	4.6800e-003	0.0529		300.7252	300.7252	0.0145		301.0871

### 3.6 Grading Haul - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0946	0.0000	0.0946	0.0143	0.0000	0.0143			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0946</b>	<b>0.0000</b>	<b>0.0946</b>	<b>0.0143</b>	<b>0.0000</b>	<b>0.0143</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0379	33.7804	6.9897	0.0848	1.8281	0.1285	1.9566	0.5011	0.1229	0.6240		9,155.6448	9,155.6448	0.6303		9,171.4020
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>1.0379</b>	<b>33.7804</b>	<b>6.9897</b>	<b>0.0848</b>	<b>1.8281</b>	<b>0.1285</b>	<b>1.9566</b>	<b>0.5011</b>	<b>0.1229</b>	<b>0.6240</b>		<b>9,155.6448</b>	<b>9,155.6448</b>	<b>0.6303</b>		<b>9,171.4020</b>

### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0404	0.0000	0.0404	6.1200e-003	0.0000	6.1200e-003			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0404	0.0000	0.0404	6.1200e-003	0.0000	6.1200e-003	0.0000	0.0000	0.0000	0.0000		0.0000

### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0379	33.7804	6.9897	0.0848	1.7037	0.1285	1.8322	0.4706	0.1229	0.5935		9,155.6448	9,155.6448	0.6303		9,171.4020
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.0379	33.7804	6.9897	0.0848	1.7037	0.1285	1.8322	0.4706	0.1229	0.5935		9,155.6448	9,155.6448	0.6303		9,171.4020



### 3.7 Trenching - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5322	5.2595	4.6734	6.2100e-003		0.3726	0.3726		0.3428	0.3428		625.5519	625.5519	0.1947		630.4205
<b>Total</b>	<b>0.5322</b>	<b>5.2595</b>	<b>4.6734</b>	<b>6.2100e-003</b>		<b>0.3726</b>	<b>0.3726</b>		<b>0.3428</b>	<b>0.3428</b>		<b>625.5519</b>	<b>625.5519</b>	<b>0.1947</b>		<b>630.4205</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4902	0.1340	1.0600e-003	0.0256	3.4500e-003	0.0291	7.3700e-003	3.3000e-003	0.0107		112.6718	112.6718	7.4200e-003		112.8572
Worker	0.0276	0.0209	0.2700	6.3000e-004	0.0559	5.0000e-004	0.0564	0.0148	4.6000e-004	0.0153		62.6845	62.6845	2.3500e-003		62.7433
<b>Total</b>	<b>0.0460</b>	<b>0.5111</b>	<b>0.4041</b>	<b>1.6900e-003</b>	<b>0.0815</b>	<b>3.9500e-003</b>	<b>0.0855</b>	<b>0.0222</b>	<b>3.7600e-003</b>	<b>0.0260</b>		<b>175.3563</b>	<b>175.3563</b>	<b>9.7700e-003</b>		<b>175.6005</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5322	5.2595	4.6734	6.2100e-003		0.3726	0.3726		0.3428	0.3428	0.0000	625.5519	625.5519	0.1947		630.4205
<b>Total</b>	<b>0.5322</b>	<b>5.2595</b>	<b>4.6734</b>	<b>6.2100e-003</b>		<b>0.3726</b>	<b>0.3726</b>		<b>0.3428</b>	<b>0.3428</b>	<b>0.0000</b>	<b>625.5519</b>	<b>625.5519</b>	<b>0.1947</b>		<b>630.4205</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4902	0.1340	1.0600e-003	0.0240	3.4500e-003	0.0274	6.9700e-003	3.3000e-003	0.0103		112.6718	112.6718	7.4200e-003		112.8572
Worker	0.0276	0.0209	0.2700	6.3000e-004	0.0515	5.0000e-004	0.0520	0.0138	4.6000e-004	0.0142		62.6845	62.6845	2.3500e-003		62.7433
<b>Total</b>	<b>0.0460</b>	<b>0.5111</b>	<b>0.4041</b>	<b>1.6900e-003</b>	<b>0.0755</b>	<b>3.9500e-003</b>	<b>0.0794</b>	<b>0.0207</b>	<b>3.7600e-003</b>	<b>0.0245</b>		<b>175.3563</b>	<b>175.3563</b>	<b>9.7700e-003</b>		<b>175.6005</b>

### 3.8 Landscaping & Field Lighting - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5789	17.4216	6.7126	0.0133		0.8474	0.8474		0.7796	0.7796		1,341.0686	1,341.0686	0.4175		1,351.5059
<b>Total</b>	<b>1.5789</b>	<b>17.4216</b>	<b>6.7126</b>	<b>0.0133</b>		<b>0.8474</b>	<b>0.8474</b>		<b>0.7796</b>	<b>0.7796</b>		<b>1,341.0686</b>	<b>1,341.0686</b>	<b>0.4175</b>		<b>1,351.5059</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0322	0.8579	0.2346	1.8500e-003	0.0448	6.0500e-003	0.0509	0.0129	5.7800e-003	0.0187		197.1756	197.1756	0.0130		197.5002
Worker	0.0995	0.0751	0.9721	2.2700e-003	0.2012	1.7900e-003	0.2030	0.0534	1.6500e-003	0.0550		225.6642	225.6642	8.4600e-003		225.8758
<b>Total</b>	<b>0.1317</b>	<b>0.9330</b>	<b>1.2067</b>	<b>4.1200e-003</b>	<b>0.2460</b>	<b>7.8400e-003</b>	<b>0.2539</b>	<b>0.0663</b>	<b>7.4300e-003</b>	<b>0.0737</b>		<b>422.8398</b>	<b>422.8398</b>	<b>0.0214</b>		<b>423.3759</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5789	17.4216	6.7126	0.0133		0.8474	0.8474		0.7796	0.7796	0.0000	1,341.0686	1,341.0686	0.4175		1,351.5059
<b>Total</b>	<b>1.5789</b>	<b>17.4216</b>	<b>6.7126</b>	<b>0.0133</b>		<b>0.8474</b>	<b>0.8474</b>		<b>0.7796</b>	<b>0.7796</b>	<b>0.0000</b>	<b>1,341.0686</b>	<b>1,341.0686</b>	<b>0.4175</b>		<b>1,351.5059</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0322	0.8579	0.2346	1.8500e-003	0.0419	6.0500e-003	0.0480	0.0122	5.7800e-003	0.0180		197.1756	197.1756	0.0130		197.5002
Worker	0.0995	0.0751	0.9721	2.2700e-003	0.1855	1.7900e-003	0.1873	0.0495	1.6500e-003	0.0512		225.6642	225.6642	8.4600e-003		225.8758
<b>Total</b>	<b>0.1317</b>	<b>0.9330</b>	<b>1.2067</b>	<b>4.1200e-003</b>	<b>0.2274</b>	<b>7.8400e-003</b>	<b>0.2352</b>	<b>0.0617</b>	<b>7.4300e-003</b>	<b>0.0691</b>		<b>422.8398</b>	<b>422.8398</b>	<b>0.0214</b>		<b>423.3759</b>

### 3.9 Paving - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4239	14.5184	12.4333	0.0189		0.8370	0.8370		0.7718	0.7718		1,872.5505	1,872.5505	0.5672		1,886.7312
Paving	0.1470					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.5709</b>	<b>14.5184</b>	<b>12.4333</b>	<b>0.0189</b>		<b>0.8370</b>	<b>0.8370</b>		<b>0.7718</b>	<b>0.7718</b>		<b>1,872.5505</b>	<b>1,872.5505</b>	<b>0.5672</b>		<b>1,886.7312</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1105	0.0834	1.0802	2.5200e-003	0.2236	1.9900e-003	0.2256	0.0593	1.8400e-003	0.0611		250.7380	250.7380	9.4000e-003		250.9731
<b>Total</b>	<b>0.1105</b>	<b>0.0834</b>	<b>1.0802</b>	<b>2.5200e-003</b>	<b>0.2236</b>	<b>1.9900e-003</b>	<b>0.2256</b>	<b>0.0593</b>	<b>1.8400e-003</b>	<b>0.0611</b>		<b>250.7380</b>	<b>250.7380</b>	<b>9.4000e-003</b>		<b>250.9731</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4239	14.5184	12.4333	0.0189		0.8370	0.8370		0.7718	0.7718	0.0000	1,872.5505	1,872.5505	0.5672		1,886.7312
Paving	0.1470					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.5709	14.5184	12.4333	0.0189		0.8370	0.8370		0.7718	0.7718	0.0000	1,872.5505	1,872.5505	0.5672		1,886.7312

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1105	0.0834	1.0802	2.5200e-003	0.2061	1.9900e-003	0.2081	0.0550	1.8400e-003	0.0568		250.7380	250.7380	9.4000e-003		250.9731
Total	0.1105	0.0834	1.0802	2.5200e-003	0.2061	1.9900e-003	0.2081	0.0550	1.8400e-003	0.0568		250.7380	250.7380	9.4000e-003		250.9731

### 3.10 Architectural Coating - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.7493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
<b>Total</b>	<b>1.0480</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>		<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>		<b>282.1171</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.2100e-003	0.0718	0.0149	1.8000e-004	3.8900e-003	2.7000e-004	4.1600e-003	1.0600e-003	2.6000e-004	1.3300e-003		19.4581	19.4581	1.3400e-003		19.4916
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0221	0.0167	0.2160	5.0000e-004	0.0447	4.0000e-004	0.0451	0.0119	3.7000e-004	0.0122		50.1476	50.1476	1.8800e-003		50.1946
<b>Total</b>	<b>0.0243</b>	<b>0.0885</b>	<b>0.2309</b>	<b>6.8000e-004</b>	<b>0.0486</b>	<b>6.7000e-004</b>	<b>0.0493</b>	<b>0.0129</b>	<b>6.3000e-004</b>	<b>0.0136</b>		<b>69.6057</b>	<b>69.6057</b>	<b>3.2200e-003</b>		<b>69.6862</b>

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.7493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
Total	1.0480	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.2100e-003	0.0718	0.0149	1.8000e-004	3.6200e-003	2.7000e-004	3.8900e-003	1.0000e-003	2.6000e-004	1.2600e-003		19.4581	19.4581	1.3400e-003		19.4916
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0221	0.0167	0.2160	5.0000e-004	0.0412	4.0000e-004	0.0416	0.0110	3.7000e-004	0.0114		50.1476	50.1476	1.8800e-003		50.1946
Total	0.0243	0.0885	0.2309	6.8000e-004	0.0448	6.7000e-004	0.0455	0.0120	6.3000e-004	0.0126		69.6057	69.6057	3.2200e-003		69.6862

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Wilson Midle School Construction - Los Angeles-South Coast County, Winter

## Wilson Midle School Construction

### Los Angeles-South Coast County, Winter

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	42.15	1000sqft	1.01	42,145.00	0
Other Non-Asphalt Surfaces	123.92	1000sqft	2.84	0.00	0

### 1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	12			Operational Year	2019
Utility Company	User Defined				
CO2 Intensity (lb/MW hr)	383.88	CH4 Intensity (lb/MW hr)	0.095	N2O Intensity (lb/MW hr)	0.012

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - \*\*City of Glendale Power Mix from California Department of Energy. Utility Annual Power Content Labels for 2016. 2016 City of Glendale Power Content Label <http://www.energy.ca.gov/data/labels/>

Land Use - See CalEEMod Assumptions

Construction Phase - See CalEEMod Assumptions

Off-road Equipment -

Off-road Equipment - Haul

Off-road Equipment - Haul

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - See CalEEMod Assumptions

Off-road Equipment - See CalEEMod Assumptions

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - CalEEMod assumptions

Trips and VMT - See CalEEMod Assumptions

Demolition -

Grading -

Architectural Coating - See CalEEMod Assumptions

Vehicle Trips -

Construction Off-road Equipment Mitigation - See CalEEMod Assumptions

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	0.00	823.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	0.00	2,468.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	8.00	16.00
tblConstructionPhase	NumDays	8.00	16.00
tblConstructionPhase	NumDays	230.00	18.00
tblGrading	MaterialExported	0.00	13,381.00
tblLandUse	LandUseSquareFeet	42,150.00	42,145.00
tblLandUse	LandUseSquareFeet	123,920.00	0.00
tblLandUse	LotAcreage	0.97	1.01
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	CH4IntensityFactor	0	0.095
tblProjectCharacteristics	CO2IntensityFactor	0	383.88
tblProjectCharacteristics	N2OIntensityFactor	0	0.012
tblTripsAndVMT	HaulingTripNumber	31.00	32.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	4.6920	65.4762	24.9477	0.1158	18.2931	2.5822	20.8753	9.9914	2.3758	12.3672	0.0000	12,277.2140	12,277.2140	1.5997	0.0000	12,317.2058
Maximum	4.6920	65.4762	24.9477	0.1158	18.2931	2.5822	20.8753	9.9914	2.3758	12.3672	0.0000	12,277.2140	12,277.2140	1.5997	0.0000	12,317.2058

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	4.6920	65.4762	24.9477	0.1158	7.9328	2.5822	10.5150	4.3018	2.3758	6.6776	0.0000	12,277.2140	12,277.2140	1.5997	0.0000	12,317.2058
Maximum	4.6920	65.4762	24.9477	0.1158	7.9328	2.5822	10.5150	4.3018	2.3758	6.6776	0.0000	12,277.2140	12,277.2140	1.5997	0.0000	12,317.2058

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	56.64	0.00	49.63	56.94	0.00	46.01	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

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#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Demo	Demolition	6/1/2018	6/28/2018	5	20	
2	Asphalt Demo Haul	Demolition	6/1/2018	6/28/2018	5	20	
3	Site Preparation	Site Preparation	6/29/2018	7/5/2018	5	5	
4	Grading	Grading	7/6/2018	7/27/2018	5	16	
5	Grading Haul	Grading	7/6/2018	7/27/2018	5	16	
6	Trenching	Trenching	7/28/2018	8/6/2018	5	6	
7	Landscaping & Field Lighting	Building Construction	8/7/2018	8/30/2018	5	18	
8	Paving	Paving	8/7/2018	8/30/2018	5	18	
9	Architectural Coating	Architectural Coating	9/1/2018	9/26/2018	5	18	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 8**

**Acres of Paving: 3.85**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,468; Non-Residential Outdoor: 823; Striped Parking Area: 2,529**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Asphalt Demo	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt Demo	Excavators	3	8.00	158	0.38
Asphalt Demo	Rubber Tired Dozers	2	8.00	247	0.40
Asphalt Demo Haul	Concrete/Industrial Saws	0	8.00	81	0.73
Asphalt Demo Haul	Excavators	0	8.00	158	0.38
Asphalt Demo Haul	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading Haul	Excavators	0	8.00	158	0.38
Grading Haul	Graders	0	8.00	187	0.41
Grading Haul	Rubber Tired Dozers	0	8.00	247	0.40
Grading Haul	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Landscaping & Field Lighting	Cranes	1	8.00	231	0.29
Landscaping & Field Lighting	Forklifts	1	6.00	89	0.20
Landscaping & Field Lighting	Generator Sets	0	8.00	84	0.74
Landscaping & Field Lighting	Rubber Tired Dozers	1	6.00	247	0.40
Landscaping & Field Lighting	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Landscaping & Field Lighting	Welders	0	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Asphalt Demo	6	15.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Demo Haul	0	0.00	0.00	32.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading Haul	0	0.00	0.00	1,673.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping & Field Lighting	3	18.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	4.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Replace Ground Cover
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads
- Clean Paved Roads

### 3.2 Asphalt Demo - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.7190	38.3225	22.3040	0.0388		1.9386	1.9386		1.8048	1.8048		3,871.7665	3,871.7665	1.0667		3,898.4344
<b>Total</b>	<b>3.7190</b>	<b>38.3225</b>	<b>22.3040</b>	<b>0.0388</b>	<b>0.0000</b>	<b>1.9386</b>	<b>1.9386</b>	<b>0.0000</b>	<b>1.8048</b>	<b>1.8048</b>		<b>3,871.7665</b>	<b>3,871.7665</b>	<b>1.0667</b>		<b>3,898.4344</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4913	0.1473	1.0300e-003	0.0256	3.5100e-003	0.0291	7.3700e-003	3.3600e-003	0.0107		109.6599	109.6599	7.9100e-003		109.8578
Worker	0.0917	0.0693	0.7459	1.7800e-003	0.1677	1.4900e-003	0.1692	0.0445	1.3800e-003	0.0458		177.0864	177.0864	6.6600e-003		177.2530
<b>Total</b>	<b>0.1109</b>	<b>0.5606</b>	<b>0.8932</b>	<b>2.8100e-003</b>	<b>0.1933</b>	<b>5.0000e-003</b>	<b>0.1983</b>	<b>0.0518</b>	<b>4.7400e-003</b>	<b>0.0566</b>		<b>286.7463</b>	<b>286.7463</b>	<b>0.0146</b>		<b>287.1108</b>



Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.7190	38.3225	22.3040	0.0388		1.9386	1.9386		1.8048	1.8048	0.0000	3,871.7665	3,871.7665	1.0667		3,898.4344
Total	3.7190	38.3225	22.3040	0.0388	0.0000	1.9386	1.9386	0.0000	1.8048	1.8048	0.0000	3,871.7665	3,871.7665	1.0667		3,898.4344

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4913	0.1473	1.0300e-003	0.0240	3.5100e-003	0.0275	6.9700e-003	3.3600e-003	0.0103		109.6599	109.6599	7.9100e-003		109.8578
Worker	0.0917	0.0693	0.7459	1.7800e-003	0.1546	1.4900e-003	0.1560	0.0413	1.3800e-003	0.0426		177.0864	177.0864	6.6600e-003		177.2530
Total	0.1109	0.5606	0.8932	2.8100e-003	0.1785	5.0000e-003	0.1835	0.0482	4.7400e-003	0.0530		286.7463	286.7463	0.0146		287.1108

### 3.3 Asphalt Demo Haul - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3381	0.0000	0.3381	0.0512	0.0000	0.0512			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.3381</b>	<b>0.0000</b>	<b>0.3381</b>	<b>0.0512</b>	<b>0.0000</b>	<b>0.0512</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0163	0.5240	0.1144	1.2800e-003	0.0280	2.0000e-003	0.0300	7.6700e-003	1.9200e-003	9.5900e-003		137.7541	137.7541	0.0100		138.0046
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0163</b>	<b>0.5240</b>	<b>0.1144</b>	<b>1.2800e-003</b>	<b>0.0280</b>	<b>2.0000e-003</b>	<b>0.0300</b>	<b>7.6700e-003</b>	<b>1.9200e-003</b>	<b>9.5900e-003</b>		<b>137.7541</b>	<b>137.7541</b>	<b>0.0100</b>		<b>138.0046</b>

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1445	0.0000	0.1445	0.0219	0.0000	0.0219			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.1445	0.0000	0.1445	0.0219	0.0000	0.0219	0.0000	0.0000	0.0000	0.0000		0.0000

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0163	0.5240	0.1144	1.2800e-003	0.0261	2.0000e-003	0.0281	7.2000e-003	1.9200e-003	9.1200e-003		137.7541	137.7541	0.0100		138.0046
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0163	0.5240	0.1144	1.2800e-003	0.0261	2.0000e-003	0.0281	7.2000e-003	1.9200e-003	9.1200e-003		137.7541	137.7541	0.0100		138.0046

### 3.4 Site Preparation - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.5627	48.1988	22.4763	0.0380		2.5769	2.5769		2.3708	2.3708		3,831.6239	3,831.6239	1.1928		3,861.4448
<b>Total</b>	<b>4.5627</b>	<b>48.1988</b>	<b>22.4763</b>	<b>0.0380</b>	<b>18.0663</b>	<b>2.5769</b>	<b>20.6432</b>	<b>9.9307</b>	<b>2.3708</b>	<b>12.3014</b>		<b>3,831.6239</b>	<b>3,831.6239</b>	<b>1.1928</b>		<b>3,861.4448</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4913	0.1473	1.0300e-003	0.0256	3.5100e-003	0.0291	7.3700e-003	3.3600e-003	0.0107		109.6599	109.6599	7.9100e-003		109.8578
Worker	0.1101	0.0831	0.8951	2.1400e-003	0.2012	1.7900e-003	0.2030	0.0534	1.6500e-003	0.0550		212.5037	212.5037	8.0000e-003		212.7036
<b>Total</b>	<b>0.1293</b>	<b>0.5745</b>	<b>1.0424</b>	<b>3.1700e-003</b>	<b>0.2268</b>	<b>5.3000e-003</b>	<b>0.2321</b>	<b>0.0607</b>	<b>5.0100e-003</b>	<b>0.0657</b>		<b>322.1636</b>	<b>322.1636</b>	<b>0.0159</b>		<b>322.5614</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7233	0.0000	7.7233	4.2454	0.0000	4.2454			0.0000			0.0000
Off-Road	4.5627	48.1988	22.4763	0.0380		2.5769	2.5769		2.3708	2.3708	0.0000	3,831.6239	3,831.6239	1.1928		3,861.4448
Total	4.5627	48.1988	22.4763	0.0380	7.7233	2.5769	10.3002	4.2454	2.3708	6.6161	0.0000	3,831.6239	3,831.6239	1.1928		3,861.4448

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4913	0.1473	1.0300e-003	0.0240	3.5100e-003	0.0275	6.9700e-003	3.3600e-003	0.0103		109.6599	109.6599	7.9100e-003		109.8578
Worker	0.1101	0.0831	0.8951	2.1400e-003	0.1855	1.7900e-003	0.1873	0.0495	1.6500e-003	0.0512		212.5037	212.5037	8.0000e-003		212.7036
Total	0.1293	0.5745	1.0424	3.1700e-003	0.2094	5.3000e-003	0.2147	0.0565	5.0100e-003	0.0615		322.1636	322.1636	0.0159		322.5614

### 3.5 Grading - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.7733	30.6725	16.5770	0.0297		1.5513	1.5513		1.4272	1.4272		2,988.0216	2,988.0216	0.9302		3,011.2769
<b>Total</b>	<b>2.7733</b>	<b>30.6725</b>	<b>16.5770</b>	<b>0.0297</b>	<b>6.5523</b>	<b>1.5513</b>	<b>8.1037</b>	<b>3.3675</b>	<b>1.4272</b>	<b>4.7947</b>		<b>2,988.0216</b>	<b>2,988.0216</b>	<b>0.9302</b>		<b>3,011.2769</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4913	0.1473	1.0300e-003	0.0256	3.5100e-003	0.0291	7.3700e-003	3.3600e-003	0.0107		109.6599	109.6599	7.9100e-003		109.8578
Worker	0.0917	0.0693	0.7459	1.7800e-003	0.1677	1.4900e-003	0.1692	0.0445	1.3800e-003	0.0458		177.0864	177.0864	6.6600e-003		177.2530
<b>Total</b>	<b>0.1109</b>	<b>0.5606</b>	<b>0.8932</b>	<b>2.8100e-003</b>	<b>0.1933</b>	<b>5.0000e-003</b>	<b>0.1983</b>	<b>0.0518</b>	<b>4.7400e-003</b>	<b>0.0566</b>		<b>286.7463</b>	<b>286.7463</b>	<b>0.0146</b>		<b>287.1108</b>

### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8011	0.0000	2.8011	1.4396	0.0000	1.4396			0.0000			0.0000
Off-Road	2.7733	30.6725	16.5770	0.0297		1.5513	1.5513		1.4272	1.4272	0.0000	2,988.0216	2,988.0216	0.9302		3,011.2769
Total	2.7733	30.6725	16.5770	0.0297	2.8011	1.5513	4.3524	1.4396	1.4272	2.8668	0.0000	2,988.0216	2,988.0216	0.9302		3,011.2769

### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4913	0.1473	1.0300e-003	0.0240	3.5100e-003	0.0275	6.9700e-003	3.3600e-003	0.0103		109.6599	109.6599	7.9100e-003		109.8578
Worker	0.0917	0.0693	0.7459	1.7800e-003	0.1546	1.4900e-003	0.1560	0.0413	1.3800e-003	0.0426		177.0864	177.0864	6.6600e-003		177.2530
Total	0.1109	0.5606	0.8932	2.8100e-003	0.1785	5.0000e-003	0.1835	0.0482	4.7400e-003	0.0530		286.7463	286.7463	0.0146		287.1108

### 3.6 Grading Haul - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0946	0.0000	0.0946	0.0143	0.0000	0.0143			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0946</b>	<b>0.0000</b>	<b>0.0946</b>	<b>0.0143</b>	<b>0.0000</b>	<b>0.0143</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0641	34.2431	7.4775	0.0833	1.8281	0.1310	1.9591	0.5011	0.1253	0.6264		9,002.446 1	9,002.4461	0.6549		9,018.818 2
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>1.0641</b>	<b>34.2431</b>	<b>7.4775</b>	<b>0.0833</b>	<b>1.8281</b>	<b>0.1310</b>	<b>1.9591</b>	<b>0.5011</b>	<b>0.1253</b>	<b>0.6264</b>		<b>9,002.446 1</b>	<b>9,002.4461</b>	<b>0.6549</b>		<b>9,018.818 2</b>



### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0404	0.0000	0.0404	6.1200e-003	0.0000	6.1200e-003			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0404	0.0000	0.0404	6.1200e-003	0.0000	6.1200e-003	0.0000	0.0000	0.0000	0.0000		0.0000

### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0641	34.2431	7.4775	0.0833	1.7037	0.1310	1.8347	0.4706	0.1253	0.5959		9,002.4461	9,002.4461	0.6549		9,018.8182
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.0641	34.2431	7.4775	0.0833	1.7037	0.1310	1.8347	0.4706	0.1253	0.5959		9,002.4461	9,002.4461	0.6549		9,018.8182

### 3.7 Trenching - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5322	5.2595	4.6734	6.2100e-003		0.3726	0.3726		0.3428	0.3428		625.5519	625.5519	0.1947		630.4205
<b>Total</b>	<b>0.5322</b>	<b>5.2595</b>	<b>4.6734</b>	<b>6.2100e-003</b>		<b>0.3726</b>	<b>0.3726</b>		<b>0.3428</b>	<b>0.3428</b>		<b>625.5519</b>	<b>625.5519</b>	<b>0.1947</b>		<b>630.4205</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4913	0.1473	1.0300e-003	0.0256	3.5100e-003	0.0291	7.3700e-003	3.3600e-003	0.0107		109.6599	109.6599	7.9100e-003		109.8578
Worker	0.0306	0.0231	0.2486	5.9000e-004	0.0559	5.0000e-004	0.0564	0.0148	4.6000e-004	0.0153		59.0288	59.0288	2.2200e-003		59.0843
<b>Total</b>	<b>0.0498</b>	<b>0.5144</b>	<b>0.3960</b>	<b>1.6200e-003</b>	<b>0.0815</b>	<b>4.0100e-003</b>	<b>0.0855</b>	<b>0.0222</b>	<b>3.8200e-003</b>	<b>0.0260</b>		<b>168.6887</b>	<b>168.6887</b>	<b>0.0101</b>		<b>168.9421</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5322	5.2595	4.6734	6.2100e-003		0.3726	0.3726		0.3428	0.3428	0.0000	625.5519	625.5519	0.1947		630.4205
<b>Total</b>	<b>0.5322</b>	<b>5.2595</b>	<b>4.6734</b>	<b>6.2100e-003</b>		<b>0.3726</b>	<b>0.3726</b>		<b>0.3428</b>	<b>0.3428</b>	<b>0.0000</b>	<b>625.5519</b>	<b>625.5519</b>	<b>0.1947</b>		<b>630.4205</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4913	0.1473	1.0300e-003	0.0240	3.5100e-003	0.0275	6.9700e-003	3.3600e-003	0.0103		109.6599	109.6599	7.9100e-003		109.8578
Worker	0.0306	0.0231	0.2486	5.9000e-004	0.0515	5.0000e-004	0.0520	0.0138	4.6000e-004	0.0142		59.0288	59.0288	2.2200e-003		59.0843
<b>Total</b>	<b>0.0498</b>	<b>0.5144</b>	<b>0.3960</b>	<b>1.6200e-003</b>	<b>0.0755</b>	<b>4.0100e-003</b>	<b>0.0795</b>	<b>0.0207</b>	<b>3.8200e-003</b>	<b>0.0245</b>		<b>168.6887</b>	<b>168.6887</b>	<b>0.0101</b>		<b>168.9421</b>

### 3.8 Landscaping & Field Lighting - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5789	17.4216	6.7126	0.0133		0.8474	0.8474		0.7796	0.7796		1,341.0686	1,341.0686	0.4175		1,351.5059
<b>Total</b>	<b>1.5789</b>	<b>17.4216</b>	<b>6.7126</b>	<b>0.0133</b>		<b>0.8474</b>	<b>0.8474</b>		<b>0.7796</b>	<b>0.7796</b>		<b>1,341.0686</b>	<b>1,341.0686</b>	<b>0.4175</b>		<b>1,351.5059</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0336	0.8599	0.2578	1.8000e-003	0.0448	6.1400e-003	0.0510	0.0129	5.8800e-003	0.0188		191.9049	191.9049	0.0139		192.2511
Worker	0.1101	0.0831	0.8951	2.1400e-003	0.2012	1.7900e-003	0.2030	0.0534	1.6500e-003	0.0550		212.5037	212.5037	8.0000e-003		212.7036
<b>Total</b>	<b>0.1436</b>	<b>0.9430</b>	<b>1.1529</b>	<b>3.9400e-003</b>	<b>0.2460</b>	<b>7.9300e-003</b>	<b>0.2539</b>	<b>0.0663</b>	<b>7.5300e-003</b>	<b>0.0738</b>		<b>404.4086</b>	<b>404.4086</b>	<b>0.0219</b>		<b>404.9547</b>

### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5789	17.4216	6.7126	0.0133		0.8474	0.8474		0.7796	0.7796	0.0000	1,341.0686	1,341.0686	0.4175		1,351.5059
Total	1.5789	17.4216	6.7126	0.0133		0.8474	0.8474		0.7796	0.7796	0.0000	1,341.0686	1,341.0686	0.4175		1,351.5059

### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0336	0.8599	0.2578	1.8000e-003	0.0419	6.1400e-003	0.0481	0.0122	5.8800e-003	0.0181		191.9049	191.9049	0.0139		192.2511
Worker	0.1101	0.0831	0.8951	2.1400e-003	0.1855	1.7900e-003	0.1873	0.0495	1.6500e-003	0.0512		212.5037	212.5037	8.0000e-003		212.7036
Total	0.1436	0.9430	1.1529	3.9400e-003	0.2274	7.9300e-003	0.2353	0.0617	7.5300e-003	0.0692		404.4086	404.4086	0.0219		404.9547

### 3.9 Paving - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4239	14.5184	12.4333	0.0189		0.8370	0.8370		0.7718	0.7718		1,872.5505	1,872.5505	0.5672		1,886.7312
Paving	0.1470					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.5709</b>	<b>14.5184</b>	<b>12.4333</b>	<b>0.0189</b>		<b>0.8370</b>	<b>0.8370</b>		<b>0.7718</b>	<b>0.7718</b>		<b>1,872.5505</b>	<b>1,872.5505</b>	<b>0.5672</b>		<b>1,886.7312</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1223	0.0923	0.9945	2.3700e-003	0.2236	1.9900e-003	0.2256	0.0593	1.8400e-003	0.0611		236.1152	236.1152	8.8900e-003		236.3373
<b>Total</b>	<b>0.1223</b>	<b>0.0923</b>	<b>0.9945</b>	<b>2.3700e-003</b>	<b>0.2236</b>	<b>1.9900e-003</b>	<b>0.2256</b>	<b>0.0593</b>	<b>1.8400e-003</b>	<b>0.0611</b>		<b>236.1152</b>	<b>236.1152</b>	<b>8.8900e-003</b>		<b>236.3373</b>

### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4239	14.5184	12.4333	0.0189		0.8370	0.8370		0.7718	0.7718	0.0000	1,872.5505	1,872.5505	0.5672		1,886.7312
Paving	0.1470					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.5709	14.5184	12.4333	0.0189		0.8370	0.8370		0.7718	0.7718	0.0000	1,872.5505	1,872.5505	0.5672		1,886.7312

### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1223	0.0923	0.9945	2.3700e-003	0.2061	1.9900e-003	0.2081	0.0550	1.8400e-003	0.0568		236.1152	236.1152	8.8900e-003		236.3373
Total	0.1223	0.0923	0.9945	2.3700e-003	0.2061	1.9900e-003	0.2081	0.0550	1.8400e-003	0.0568		236.1152	236.1152	8.8900e-003		236.3373

### 3.10 Architectural Coating - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.7493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
<b>Total</b>	<b>1.0480</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>		<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>		<b>282.1171</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.2600e-003	0.0728	0.0159	1.8000e-004	3.8900e-003	2.8000e-004	4.1600e-003	1.0600e-003	2.7000e-004	1.3300e-003		19.1325	19.1325	1.3900e-003		19.1673
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0245	0.0185	0.1989	4.7000e-004	0.0447	4.0000e-004	0.0451	0.0119	3.7000e-004	0.0122		47.2230	47.2230	1.7800e-003		47.2675
<b>Total</b>	<b>0.0267</b>	<b>0.0913</b>	<b>0.2148</b>	<b>6.5000e-004</b>	<b>0.0486</b>	<b>6.8000e-004</b>	<b>0.0493</b>	<b>0.0129</b>	<b>6.4000e-004</b>	<b>0.0136</b>		<b>66.3556</b>	<b>66.3556</b>	<b>3.1700e-003</b>		<b>66.4348</b>



### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.7493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
Total	1.0480	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171

### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.2600e-003	0.0728	0.0159	1.8000e-004	3.6200e-003	2.8000e-004	3.9000e-003	1.0000e-003	2.7000e-004	1.2700e-003		19.1325	19.1325	1.3900e-003		19.1673
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0245	0.0185	0.1989	4.7000e-004	0.0412	4.0000e-004	0.0416	0.0110	3.7000e-004	0.0114		47.2230	47.2230	1.7800e-003		47.2675
Total	0.0267	0.0913	0.2148	6.5000e-004	0.0448	6.8000e-004	0.0455	0.0120	6.4000e-004	0.0126		66.3556	66.3556	3.1700e-003		66.4348

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Wilson Midle School Construction - Los Angeles-South Coast County, Summer

## Wilson Midle School Construction-- Mitigated

### Los Angeles-South Coast County, Summer

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	42.15	1000sqft	1.01	42,145.00	0
Other Non-Asphalt Surfaces	123.92	1000sqft	2.84	0.00	0

### 1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	12			Operational Year	2019
Utility Company	User Defined				
CO2 Intensity (lb/MW hr)	383.88	CH4 Intensity (lb/MW hr)	0.095	N2O Intensity (lb/MW hr)	0.012

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - \*\*City of Glendale Power Mix from California Department of Energy. Utility Annual Power Content Labels for 2016. 2016 City of Glendale Power Content Label <http://www.energy.ca.gov/data/labels/>

Land Use - See CalEEMod Assumptions

Construction Phase - See CalEEMod Assumptions

Off-road Equipment -

Off-road Equipment - Haul

Off-road Equipment - Haul

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - See CalEEMod Assumptions

Off-road Equipment - See CalEEMod Assumptions

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - CalEEMod assumptions

Trips and VMT - See CalEEMod Assumptions

Demolition -

Grading -

Architectural Coating - See CalEEMod Assumptions

Vehicle Trips -

Construction Off-road Equipment Mitigation - See CalEEMod Assumptions

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	0.00	823.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	0.00	2,468.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	55
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	55
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	8.00	16.00
tblConstructionPhase	NumDays	8.00	16.00
tblConstructionPhase	NumDays	230.00	18.00
tblGrading	MaterialExported	0.00	13,381.00
tblLandUse	LandUseSquareFeet	42,150.00	42,145.00
tblLandUse	LandUseSquareFeet	123,920.00	0.00
tblLandUse	LotAcreage	0.97	1.01
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	CH4IntensityFactor	0	0.095
tblProjectCharacteristics	CO2IntensityFactor	0	383.88
tblProjectCharacteristics	N2OIntensityFactor	0	0.012
tblTripsAndVMT	HaulingTripNumber	31.00	32.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	4.6806	65.0057	24.5108	0.1174	18.2931	2.5822	20.8752	9.9914	2.3757	12.3671	0.0000	12,444.3917	12,444.3917	1.5750	0.0000	12,483.7660
Maximum	4.6806	65.0057	24.5108	0.1174	18.2931	2.5822	20.8752	9.9914	2.3757	12.3671	0.0000	12,444.3917	12,444.3917	1.5750	0.0000	12,483.7660

## Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	1.5023	35.9069	25.6865	0.1174	7.9328	0.1819	8.0001	4.3018	0.1761	4.3689	0.0000	12,444.3917	12,444.3917	1.5750	0.0000	12,483.7660
Maximum	1.5023	35.9069	25.6865	0.1174	7.9328	0.1819	8.0001	4.3018	0.1761	4.3689	0.0000	12,444.3917	12,444.3917	1.5750	0.0000	12,483.7660

	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	67.90	44.76	-4.80	0.00	56.64	92.96	61.68	56.94	92.59	64.67	0.00	0.00	0.00	0.00	0.00	0.00

## 3.0 Construction Detail

### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Demo	Demolition	6/1/2018	6/28/2018	5	20	
2	Asphalt Demo Haul	Demolition	6/1/2018	6/28/2018	5	20	
3	Site Preparation	Site Preparation	6/29/2018	7/5/2018	5	5	
4	Grading	Grading	7/6/2018	7/27/2018	5	16	
5	Grading Haul	Grading	7/6/2018	7/27/2018	5	16	
6	Trenching	Trenching	7/28/2018	8/6/2018	5	6	
7	Landscaping & Field Lighting	Building Construction	8/7/2018	8/30/2018	5	18	
8	Paving	Paving	8/7/2018	8/30/2018	5	18	
9	Architectural Coating	Architectural Coating	9/1/2018	9/26/2018	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 8

Acres of Paving: 3.85

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,468; Non-Residential Outdoor: 823; Striped Parking Area: 2,529

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Asphalt Demo	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt Demo	Excavators	3	8.00	158	0.38
Asphalt Demo	Rubber Tired Dozers	2	8.00	247	0.40
Asphalt Demo Haul	Concrete/Industrial Saws	0	8.00	81	0.73
Asphalt Demo Haul	Excavators	0	8.00	158	0.38
Asphalt Demo Haul	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading Haul	Excavators	0	8.00	158	0.38
Grading Haul	Graders	0	8.00	187	0.41
Grading Haul	Rubber Tired Dozers	0	8.00	247	0.40
Grading Haul	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Landscaping & Field Lighting	Cranes	1	8.00	231	0.29
Landscaping & Field Lighting	Forklifts	1	6.00	89	0.20
Landscaping & Field Lighting	Generator Sets	0	8.00	84	0.74
Landscaping & Field Lighting	Rubber Tired Dozers	1	6.00	247	0.40
Landscaping & Field Lighting	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Landscaping & Field Lighting	Welders	0	8.00	46	0.45

Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

### Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Asphalt Demo	6	15.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Demo Haul	0	0.00	0.00	32.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading Haul	0	0.00	0.00	1,673.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping & Field Lighting	3	18.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	4.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads



### 3.2 Asphalt Demo - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.7190	38.3225	22.3040	0.0388		1.9386	1.9386		1.8048	1.8048		3,871.7665	3,871.7665	1.0667		3,898.4344
<b>Total</b>	<b>3.7190</b>	<b>38.3225</b>	<b>22.3040</b>	<b>0.0388</b>	<b>0.0000</b>	<b>1.9386</b>	<b>1.9386</b>	<b>0.0000</b>	<b>1.8048</b>	<b>1.8048</b>		<b>3,871.7665</b>	<b>3,871.7665</b>	<b>1.0667</b>		<b>3,898.4344</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4902	0.1340	1.0600e-003	0.0256	3.4500e-003	0.0291	7.3700e-003	3.3000e-003	0.0107		112.6718	112.6718	7.4200e-003		112.8572
Worker	0.0829	0.0625	0.8101	1.8900e-003	0.1677	1.4900e-003	0.1692	0.0445	1.3800e-003	0.0458		188.0535	188.0535	7.0500e-003		188.2298
<b>Total</b>	<b>0.1013</b>	<b>0.5528</b>	<b>0.9442</b>	<b>2.9500e-003</b>	<b>0.1933</b>	<b>4.9400e-003</b>	<b>0.1982</b>	<b>0.0518</b>	<b>4.6800e-003</b>	<b>0.0565</b>		<b>300.7252</b>	<b>300.7252</b>	<b>0.0145</b>		<b>301.0871</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4623	2.0032	23.2798	0.0388		0.0616	0.0616		0.0616	0.0616	0.0000	3,871.7665	3,871.7665	1.0667		3,898.4344
Total	0.4623	2.0032	23.2798	0.0388	0.0000	0.0616	0.0616	0.0000	0.0616	0.0616	0.0000	3,871.7665	3,871.7665	1.0667		3,898.4344

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4902	0.1340	1.0600e-003	0.0240	3.4500e-003	0.0274	6.9700e-003	3.3000e-003	0.0103		112.6718	112.6718	7.4200e-003		112.8572
Worker	0.0829	0.0625	0.8101	1.8900e-003	0.1546	1.4900e-003	0.1560	0.0413	1.3800e-003	0.0426		188.0535	188.0535	7.0500e-003		188.2298
Total	0.1013	0.5528	0.9442	2.9500e-003	0.1785	4.9400e-003	0.1835	0.0482	4.6800e-003	0.0529		300.7252	300.7252	0.0145		301.0871

### 3.3 Asphalt Demo Haul - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3381	0.0000	0.3381	0.0512	0.0000	0.0512			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.3381</b>	<b>0.0000</b>	<b>0.3381</b>	<b>0.0512</b>	<b>0.0000</b>	<b>0.0512</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0159	0.5169	0.1070	1.3000e-003	0.0280	1.9700e-003	0.0299	7.6700e-003	1.8800e-003	9.5500e-003		140.0983	140.0983	9.6400e-003		140.3395
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0159</b>	<b>0.5169</b>	<b>0.1070</b>	<b>1.3000e-003</b>	<b>0.0280</b>	<b>1.9700e-003</b>	<b>0.0299</b>	<b>7.6700e-003</b>	<b>1.8800e-003</b>	<b>9.5500e-003</b>		<b>140.0983</b>	<b>140.0983</b>	<b>9.6400e-003</b>		<b>140.3395</b>

### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1445	0.0000	0.1445	0.0219	0.0000	0.0219			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.1445	0.0000	0.1445	0.0219	0.0000	0.0219	0.0000	0.0000	0.0000	0.0000		0.0000

### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0159	0.5169	0.1070	1.3000e-003	0.0261	1.9700e-003	0.0280	7.2000e-003	1.8800e-003	9.0800e-003		140.0983	140.0983	9.6400e-003		140.3395
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0159	0.5169	0.1070	1.3000e-003	0.0261	1.9700e-003	0.0280	7.2000e-003	1.8800e-003	9.0800e-003		140.0983	140.0983	9.6400e-003		140.3395

### 3.4 Site Preparation - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.5627	48.1988	22.4763	0.0380		2.5769	2.5769		2.3708	2.3708		3,831.6239	3,831.6239	1.1928		3,861.4448
<b>Total</b>	<b>4.5627</b>	<b>48.1988</b>	<b>22.4763</b>	<b>0.0380</b>	<b>18.0663</b>	<b>2.5769</b>	<b>20.6432</b>	<b>9.9307</b>	<b>2.3708</b>	<b>12.3014</b>		<b>3,831.6239</b>	<b>3,831.6239</b>	<b>1.1928</b>		<b>3,861.4448</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4902	0.1340	1.0600e-003	0.0256	3.4500e-003	0.0291	7.3700e-003	3.3000e-003	0.0107		112.6718	112.6718	7.4200e-003		112.8572
Worker	0.0995	0.0751	0.9721	2.2700e-003	0.2012	1.7900e-003	0.2030	0.0534	1.6500e-003	0.0550		225.6642	225.6642	8.4600e-003		225.8758
<b>Total</b>	<b>0.1179</b>	<b>0.5653</b>	<b>1.1062</b>	<b>3.3300e-003</b>	<b>0.2268</b>	<b>5.2400e-003</b>	<b>0.2321</b>	<b>0.0607</b>	<b>4.9500e-003</b>	<b>0.0657</b>		<b>338.3359</b>	<b>338.3359</b>	<b>0.0159</b>		<b>338.7330</b>

### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7233	0.0000	7.7233	4.2454	0.0000	4.2454			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0380		0.0621	0.0621		0.0621	0.0621	0.0000	3,831.6239	3,831.6239	1.1928		3,861.4448
Total	0.4656	2.0175	20.8690	0.0380	7.7233	0.0621	7.7854	4.2454	0.0621	4.3075	0.0000	3,831.6239	3,831.6239	1.1928		3,861.4448

### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4902	0.1340	1.0600e-003	0.0240	3.4500e-003	0.0274	6.9700e-003	3.3000e-003	0.0103		112.6718	112.6718	7.4200e-003		112.8572
Worker	0.0995	0.0751	0.9721	2.2700e-003	0.1855	1.7900e-003	0.1873	0.0495	1.6500e-003	0.0512		225.6642	225.6642	8.4600e-003		225.8758
Total	0.1179	0.5653	1.1062	3.3300e-003	0.2094	5.2400e-003	0.2147	0.0565	4.9500e-003	0.0614		338.3359	338.3359	0.0159		338.7330

### 3.5 Grading - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.7733	30.6725	16.5770	0.0297		1.5513	1.5513		1.4272	1.4272		2,988.0216	2,988.0216	0.9302		3,011.2769
<b>Total</b>	<b>2.7733</b>	<b>30.6725</b>	<b>16.5770</b>	<b>0.0297</b>	<b>6.5523</b>	<b>1.5513</b>	<b>8.1037</b>	<b>3.3675</b>	<b>1.4272</b>	<b>4.7947</b>		<b>2,988.0216</b>	<b>2,988.0216</b>	<b>0.9302</b>		<b>3,011.2769</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4902	0.1340	1.0600e-003	0.0256	3.4500e-003	0.0291	7.3700e-003	3.3000e-003	0.0107		112.6718	112.6718	7.4200e-003		112.8572
Worker	0.0829	0.0625	0.8101	1.8900e-003	0.1677	1.4900e-003	0.1692	0.0445	1.3800e-003	0.0458		188.0535	188.0535	7.0500e-003		188.2298
<b>Total</b>	<b>0.1013</b>	<b>0.5528</b>	<b>0.9442</b>	<b>2.9500e-003</b>	<b>0.1933</b>	<b>4.9400e-003</b>	<b>0.1982</b>	<b>0.0518</b>	<b>4.6800e-003</b>	<b>0.0565</b>		<b>300.7252</b>	<b>300.7252</b>	<b>0.0145</b>		<b>301.0871</b>

### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8011	0.0000	2.8011	1.4396	0.0000	1.4396			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0297		0.0484	0.0484		0.0484	0.0484	0.0000	2,988.0216	2,988.0216	0.9302		3,011.2769
Total	0.3632	1.5737	17.7527	0.0297	2.8011	0.0484	2.8495	1.4396	0.0484	1.4880	0.0000	2,988.0216	2,988.0216	0.9302		3,011.2769

### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4902	0.1340	1.0600e-003	0.0240	3.4500e-003	0.0274	6.9700e-003	3.3000e-003	0.0103		112.6718	112.6718	7.4200e-003		112.8572
Worker	0.0829	0.0625	0.8101	1.8900e-003	0.1546	1.4900e-003	0.1560	0.0413	1.3800e-003	0.0426		188.0535	188.0535	7.0500e-003		188.2298
Total	0.1013	0.5528	0.9442	2.9500e-003	0.1785	4.9400e-003	0.1835	0.0482	4.6800e-003	0.0529		300.7252	300.7252	0.0145		301.0871



### 3.6 Grading Haul - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0946	0.0000	0.0946	0.0143	0.0000	0.0143			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0946</b>	<b>0.0000</b>	<b>0.0946</b>	<b>0.0143</b>	<b>0.0000</b>	<b>0.0143</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0379	33.7804	6.9897	0.0848	1.8281	0.1285	1.9566	0.5011	0.1229	0.6240		9,155.6448	9,155.6448	0.6303		9,171.4020
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>1.0379</b>	<b>33.7804</b>	<b>6.9897</b>	<b>0.0848</b>	<b>1.8281</b>	<b>0.1285</b>	<b>1.9566</b>	<b>0.5011</b>	<b>0.1229</b>	<b>0.6240</b>		<b>9,155.6448</b>	<b>9,155.6448</b>	<b>0.6303</b>		<b>9,171.4020</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0404	0.0000	0.0404	6.1200e-003	0.0000	6.1200e-003			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0404	0.0000	0.0404	6.1200e-003	0.0000	6.1200e-003	0.0000	0.0000	0.0000	0.0000		0.0000

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0379	33.7804	6.9897	0.0848	1.7037	0.1285	1.8322	0.4706	0.1229	0.5935		9,155.6448	9,155.6448	0.6303		9,171.4020
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.0379	33.7804	6.9897	0.0848	1.7037	0.1285	1.8322	0.4706	0.1229	0.5935		9,155.6448	9,155.6448	0.6303		9,171.4020

### 3.7 Trenching - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5322	5.2595	4.6734	6.2100e-003		0.3726	0.3726		0.3428	0.3428		625.5519	625.5519	0.1947		630.4205
<b>Total</b>	<b>0.5322</b>	<b>5.2595</b>	<b>4.6734</b>	<b>6.2100e-003</b>		<b>0.3726</b>	<b>0.3726</b>		<b>0.3428</b>	<b>0.3428</b>		<b>625.5519</b>	<b>625.5519</b>	<b>0.1947</b>		<b>630.4205</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4902	0.1340	1.0600e-003	0.0256	3.4500e-003	0.0291	7.3700e-003	3.3000e-003	0.0107		112.6718	112.6718	7.4200e-003		112.8572
Worker	0.0276	0.0209	0.2700	6.3000e-004	0.0559	5.0000e-004	0.0564	0.0148	4.6000e-004	0.0153		62.6845	62.6845	2.3500e-003		62.7433
<b>Total</b>	<b>0.0460</b>	<b>0.5111</b>	<b>0.4041</b>	<b>1.6900e-003</b>	<b>0.0815</b>	<b>3.9500e-003</b>	<b>0.0855</b>	<b>0.0222</b>	<b>3.7600e-003</b>	<b>0.0260</b>		<b>175.3563</b>	<b>175.3563</b>	<b>9.7700e-003</b>		<b>175.6005</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0760	0.3292	4.6841	6.2100e-003		0.0101	0.0101		0.0101	0.0101	0.0000	625.5519	625.5519	0.1947		630.4205
<b>Total</b>	<b>0.0760</b>	<b>0.3292</b>	<b>4.6841</b>	<b>6.2100e-003</b>		<b>0.0101</b>	<b>0.0101</b>		<b>0.0101</b>	<b>0.0101</b>	<b>0.0000</b>	<b>625.5519</b>	<b>625.5519</b>	<b>0.1947</b>		<b>630.4205</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4902	0.1340	1.0600e-003	0.0240	3.4500e-003	0.0274	6.9700e-003	3.3000e-003	0.0103		112.6718	112.6718	7.4200e-003		112.8572
Worker	0.0276	0.0209	0.2700	6.3000e-004	0.0515	5.0000e-004	0.0520	0.0138	4.6000e-004	0.0142		62.6845	62.6845	2.3500e-003		62.7433
<b>Total</b>	<b>0.0460</b>	<b>0.5111</b>	<b>0.4041</b>	<b>1.6900e-003</b>	<b>0.0755</b>	<b>3.9500e-003</b>	<b>0.0794</b>	<b>0.0207</b>	<b>3.7600e-003</b>	<b>0.0245</b>		<b>175.3563</b>	<b>175.3563</b>	<b>9.7700e-003</b>		<b>175.6005</b>

### 3.8 Landscaping & Field Lighting - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5789	17.4216	6.7126	0.0133		0.8474	0.8474		0.7796	0.7796		1,341.0686	1,341.0686	0.4175		1,351.5059
<b>Total</b>	<b>1.5789</b>	<b>17.4216</b>	<b>6.7126</b>	<b>0.0133</b>		<b>0.8474</b>	<b>0.8474</b>		<b>0.7796</b>	<b>0.7796</b>		<b>1,341.0686</b>	<b>1,341.0686</b>	<b>0.4175</b>		<b>1,351.5059</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0322	0.8579	0.2346	1.8500e-003	0.0448	6.0500e-003	0.0509	0.0129	5.7800e-003	0.0187		197.1756	197.1756	0.0130		197.5002
Worker	0.0995	0.0751	0.9721	2.2700e-003	0.2012	1.7900e-003	0.2030	0.0534	1.6500e-003	0.0550		225.6642	225.6642	8.4600e-003		225.8758
<b>Total</b>	<b>0.1317</b>	<b>0.9330</b>	<b>1.2067</b>	<b>4.1200e-003</b>	<b>0.2460</b>	<b>7.8400e-003</b>	<b>0.2539</b>	<b>0.0663</b>	<b>7.4300e-003</b>	<b>0.0737</b>		<b>422.8398</b>	<b>422.8398</b>	<b>0.0214</b>		<b>423.3759</b>

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1634	0.7082	6.3457	0.0133		0.0218	0.0218		0.0218	0.0218	0.0000	1,341.0686	1,341.0686	0.4175		1,351.5059
Total	0.1634	0.7082	6.3457	0.0133		0.0218	0.0218		0.0218	0.0218	0.0000	1,341.0686	1,341.0686	0.4175		1,351.5059

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0322	0.8579	0.2346	1.8500e-003	0.0419	6.0500e-003	0.0480	0.0122	5.7800e-003	0.0180		197.1756	197.1756	0.0130		197.5002
Worker	0.0995	0.0751	0.9721	2.2700e-003	0.1855	1.7900e-003	0.1873	0.0495	1.6500e-003	0.0512		225.6642	225.6642	8.4600e-003		225.8758
Total	0.1317	0.9330	1.2067	4.1200e-003	0.2274	7.8400e-003	0.2352	0.0617	7.4300e-003	0.0691		422.8398	422.8398	0.0214		423.3759

### 3.9 Paving - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4239	14.5184	12.4333	0.0189		0.8370	0.8370		0.7718	0.7718		1,872.5505	1,872.5505	0.5672		1,886.7312
Paving	0.1470					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.5709</b>	<b>14.5184</b>	<b>12.4333</b>	<b>0.0189</b>		<b>0.8370</b>	<b>0.8370</b>		<b>0.7718</b>	<b>0.7718</b>		<b>1,872.5505</b>	<b>1,872.5505</b>	<b>0.5672</b>		<b>1,886.7312</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1105	0.0834	1.0802	2.5200e-003	0.2236	1.9900e-003	0.2256	0.0593	1.8400e-003	0.0611		250.7380	250.7380	9.4000e-003		250.9731
<b>Total</b>	<b>0.1105</b>	<b>0.0834</b>	<b>1.0802</b>	<b>2.5200e-003</b>	<b>0.2236</b>	<b>1.9900e-003</b>	<b>0.2256</b>	<b>0.0593</b>	<b>1.8400e-003</b>	<b>0.0611</b>		<b>250.7380</b>	<b>250.7380</b>	<b>9.4000e-003</b>		<b>250.9731</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3076	1.5032	13.9949	0.0189		0.0510	0.0510		0.0510	0.0510	0.0000	1,872.5505	1,872.5505	0.5672		1,886.7312
Paving	0.1470					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.4546	1.5032	13.9949	0.0189		0.0510	0.0510		0.0510	0.0510	0.0000	1,872.5505	1,872.5505	0.5672		1,886.7312

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1105	0.0834	1.0802	2.5200e-003	0.2061	1.9900e-003	0.2081	0.0550	1.8400e-003	0.0568		250.7380	250.7380	9.4000e-003		250.9731
Total	0.1105	0.0834	1.0802	2.5200e-003	0.2061	1.9900e-003	0.2081	0.0550	1.8400e-003	0.0568		250.7380	250.7380	9.4000e-003		250.9731



### 3.10 Architectural Coating - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.7493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
<b>Total</b>	<b>1.0480</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>		<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>		<b>282.1171</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.2100e-003	0.0718	0.0149	1.8000e-004	3.8900e-003	2.7000e-004	4.1600e-003	1.0600e-003	2.6000e-004	1.3300e-003		19.4581	19.4581	1.3400e-003		19.4916
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0221	0.0167	0.2160	5.0000e-004	0.0447	4.0000e-004	0.0451	0.0119	3.7000e-004	0.0122		50.1476	50.1476	1.8800e-003		50.1946
<b>Total</b>	<b>0.0243</b>	<b>0.0885</b>	<b>0.2309</b>	<b>6.8000e-004</b>	<b>0.0486</b>	<b>6.7000e-004</b>	<b>0.0493</b>	<b>0.0129</b>	<b>6.3000e-004</b>	<b>0.0136</b>		<b>69.6057</b>	<b>69.6057</b>	<b>3.2200e-003</b>		<b>69.6862</b>

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.7493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
Total	1.0480	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.2100e-003	0.0718	0.0149	1.8000e-004	3.6200e-003	2.7000e-004	3.8900e-003	1.0000e-003	2.6000e-004	1.2600e-003		19.4581	19.4581	1.3400e-003		19.4916
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0221	0.0167	0.2160	5.0000e-004	0.0412	4.0000e-004	0.0416	0.0110	3.7000e-004	0.0114		50.1476	50.1476	1.8800e-003		50.1946
Total	0.0243	0.0885	0.2309	6.8000e-004	0.0448	6.7000e-004	0.0455	0.0120	6.3000e-004	0.0126		69.6057	69.6057	3.2200e-003		69.6862

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Wilson Midle School Construction - Los Angeles-South Coast County, Winter

## Wilson Midle School Construction-- Mitigated

### Los Angeles-South Coast County, Winter

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	42.15	1000sqft	1.01	42,145.00	0
Other Non-Asphalt Surfaces	123.92	1000sqft	2.84	0.00	0

### 1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	12			Operational Year	2019
Utility Company	User Defined				
CO2 Intensity (lb/MW hr)	383.88	CH4 Intensity (lb/MW hr)	0.095	N2O Intensity (lb/MW hr)	0.012

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - \*\*City of Glendale Power Mix from California Department of Energy. Utility Annual Power Content Labels for 2016. 2016 City of Glendale Power Content Label <http://www.energy.ca.gov/data/labels/>

Land Use - See CalEEMod Assumptions

Construction Phase - See CalEEMod Assumptions

Off-road Equipment -

Off-road Equipment - Haul

Off-road Equipment - Haul

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - See CalEEMod Assumptions

Off-road Equipment - See CalEEMod Assumptions

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - CalEEMod assumptions

Trips and VMT - See CalEEMod Assumptions

Demolition -

Grading -

Architectural Coating - See CalEEMod Assumptions

Vehicle Trips -

Construction Off-road Equipment Mitigation - See CalEEMod Assumptions

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	0.00	823.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	0.00	2,468.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	55
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	55
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	8.00	16.00
tblConstructionPhase	NumDays	8.00	16.00
tblConstructionPhase	NumDays	230.00	18.00
tblGrading	MaterialExported	0.00	13,381.00
tblLandUse	LandUseSquareFeet	42,150.00	42,145.00
tblLandUse	LandUseSquareFeet	123,920.00	0.00
tblLandUse	LotAcreage	0.97	1.01
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	CH4IntensityFactor	0	0.095
tblProjectCharacteristics	CO2IntensityFactor	0	383.88
tblProjectCharacteristics	N2OIntensityFactor	0	0.012
tblTripsAndVMT	HaulingTripNumber	31.00	32.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	4.6920	65.4762	24.9477	0.1158	18.2931	2.5822	20.8753	9.9914	2.3758	12.3672	0.0000	12,277.2140	12,277.2140	1.5997	0.0000	12,317.2058
Maximum	4.6920	65.4762	24.9477	0.1158	18.2931	2.5822	20.8753	9.9914	2.3758	12.3672	0.0000	12,277.2140	12,277.2140	1.5997	0.0000	12,317.2058

## Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	1.5382	36.3774	26.1234	0.1158	7.9328	0.1844	8.0001	4.3018	0.1785	4.3689	0.0000	12,277.21 40	12,277.214 0	1.5997	0.0000	12,317.20 58
Maximum	1.5382	36.3774	26.1234	0.1158	7.9328	0.1844	8.0001	4.3018	0.1785	4.3689	0.0000	12,277.21 40	12,277.214 0	1.5997	0.0000	12,317.20 58

	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	67.22	44.44	-4.71	0.00	56.64	92.86	61.68	56.94	92.49	64.67	0.00	0.00	0.00	0.00	0.00	0.00

## 3.0 Construction Detail

### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Demo	Demolition	6/1/2018	6/28/2018	5	20	
2	Asphalt Demo Haul	Demolition	6/1/2018	6/28/2018	5	20	
3	Site Preparation	Site Preparation	6/29/2018	7/5/2018	5	5	
4	Grading	Grading	7/6/2018	7/27/2018	5	16	
5	Grading Haul	Grading	7/6/2018	7/27/2018	5	16	
6	Trenching	Trenching	7/28/2018	8/6/2018	5	6	
7	Landscaping & Field Lighting	Building Construction	8/7/2018	8/30/2018	5	18	
8	Paving	Paving	8/7/2018	8/30/2018	5	18	
9	Architectural Coating	Architectural Coating	9/1/2018	9/26/2018	5	18	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 8**

**Acres of Paving: 3.85**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,468; Non-Residential Outdoor: 823; Striped Parking Area: 2,529**

**OffRoad Equipment**



Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Asphalt Demo	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt Demo	Excavators	3	8.00	158	0.38
Asphalt Demo	Rubber Tired Dozers	2	8.00	247	0.40
Asphalt Demo Haul	Concrete/Industrial Saws	0	8.00	81	0.73
Asphalt Demo Haul	Excavators	0	8.00	158	0.38
Asphalt Demo Haul	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading Haul	Excavators	0	8.00	158	0.38
Grading Haul	Graders	0	8.00	187	0.41
Grading Haul	Rubber Tired Dozers	0	8.00	247	0.40
Grading Haul	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Landscaping & Field Lighting	Cranes	1	8.00	231	0.29
Landscaping & Field Lighting	Forklifts	1	6.00	89	0.20
Landscaping & Field Lighting	Generator Sets	0	8.00	84	0.74
Landscaping & Field Lighting	Rubber Tired Dozers	1	6.00	247	0.40
Landscaping & Field Lighting	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Landscaping & Field Lighting	Welders	0	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

## Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Asphalt Demo	6	15.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Demo Haul	0	0.00	0.00	32.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading Haul	0	0.00	0.00	1,673.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping & Field Lighting	3	18.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	4.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

### 3.2 Asphalt Demo - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.7190	38.3225	22.3040	0.0388		1.9386	1.9386		1.8048	1.8048		3,871.7665	3,871.7665	1.0667		3,898.4344
<b>Total</b>	<b>3.7190</b>	<b>38.3225</b>	<b>22.3040</b>	<b>0.0388</b>	<b>0.0000</b>	<b>1.9386</b>	<b>1.9386</b>	<b>0.0000</b>	<b>1.8048</b>	<b>1.8048</b>		<b>3,871.7665</b>	<b>3,871.7665</b>	<b>1.0667</b>		<b>3,898.4344</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4913	0.1473	1.0300e-003	0.0256	3.5100e-003	0.0291	7.3700e-003	3.3600e-003	0.0107		109.6599	109.6599	7.9100e-003		109.8578
Worker	0.0917	0.0693	0.7459	1.7800e-003	0.1677	1.4900e-003	0.1692	0.0445	1.3800e-003	0.0458		177.0864	177.0864	6.6600e-003		177.2530
<b>Total</b>	<b>0.1109</b>	<b>0.5606</b>	<b>0.8932</b>	<b>2.8100e-003</b>	<b>0.1933</b>	<b>5.0000e-003</b>	<b>0.1983</b>	<b>0.0518</b>	<b>4.7400e-003</b>	<b>0.0566</b>		<b>286.7463</b>	<b>286.7463</b>	<b>0.0146</b>		<b>287.1108</b>

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4623	2.0032	23.2798	0.0388		0.0616	0.0616		0.0616	0.0616	0.0000	3,871.7665	3,871.7665	1.0667		3,898.4344
Total	0.4623	2.0032	23.2798	0.0388	0.0000	0.0616	0.0616	0.0000	0.0616	0.0616	0.0000	3,871.7665	3,871.7665	1.0667		3,898.4344

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4913	0.1473	1.0300e-003	0.0240	3.5100e-003	0.0275	6.9700e-003	3.3600e-003	0.0103		109.6599	109.6599	7.9100e-003		109.8578
Worker	0.0917	0.0693	0.7459	1.7800e-003	0.1546	1.4900e-003	0.1560	0.0413	1.3800e-003	0.0426		177.0864	177.0864	6.6600e-003		177.2530
Total	0.1109	0.5606	0.8932	2.8100e-003	0.1785	5.0000e-003	0.1835	0.0482	4.7400e-003	0.0530		286.7463	286.7463	0.0146		287.1108

### 3.3 Asphalt Demo Haul - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3381	0.0000	0.3381	0.0512	0.0000	0.0512			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.3381</b>	<b>0.0000</b>	<b>0.3381</b>	<b>0.0512</b>	<b>0.0000</b>	<b>0.0512</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0163	0.5240	0.1144	1.2800e-003	0.0280	2.0000e-003	0.0300	7.6700e-003	1.9200e-003	9.5900e-003		137.7541	137.7541	0.0100		138.0046
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0163</b>	<b>0.5240</b>	<b>0.1144</b>	<b>1.2800e-003</b>	<b>0.0280</b>	<b>2.0000e-003</b>	<b>0.0300</b>	<b>7.6700e-003</b>	<b>1.9200e-003</b>	<b>9.5900e-003</b>		<b>137.7541</b>	<b>137.7541</b>	<b>0.0100</b>		<b>138.0046</b>

### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1445	0.0000	0.1445	0.0219	0.0000	0.0219			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.1445	0.0000	0.1445	0.0219	0.0000	0.0219	0.0000	0.0000	0.0000	0.0000		0.0000

### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0163	0.5240	0.1144	1.2800e-003	0.0261	2.0000e-003	0.0281	7.2000e-003	1.9200e-003	9.1200e-003		137.7541	137.7541	0.0100		138.0046
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0163	0.5240	0.1144	1.2800e-003	0.0261	2.0000e-003	0.0281	7.2000e-003	1.9200e-003	9.1200e-003		137.7541	137.7541	0.0100		138.0046

### 3.4 Site Preparation - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.5627	48.1988	22.4763	0.0380		2.5769	2.5769		2.3708	2.3708		3,831.6239	3,831.6239	1.1928		3,861.4448
<b>Total</b>	<b>4.5627</b>	<b>48.1988</b>	<b>22.4763</b>	<b>0.0380</b>	<b>18.0663</b>	<b>2.5769</b>	<b>20.6432</b>	<b>9.9307</b>	<b>2.3708</b>	<b>12.3014</b>		<b>3,831.6239</b>	<b>3,831.6239</b>	<b>1.1928</b>		<b>3,861.4448</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4913	0.1473	1.0300e-003	0.0256	3.5100e-003	0.0291	7.3700e-003	3.3600e-003	0.0107		109.6599	109.6599	7.9100e-003		109.8578
Worker	0.1101	0.0831	0.8951	2.1400e-003	0.2012	1.7900e-003	0.2030	0.0534	1.6500e-003	0.0550		212.5037	212.5037	8.0000e-003		212.7036
<b>Total</b>	<b>0.1293</b>	<b>0.5745</b>	<b>1.0424</b>	<b>3.1700e-003</b>	<b>0.2268</b>	<b>5.3000e-003</b>	<b>0.2321</b>	<b>0.0607</b>	<b>5.0100e-003</b>	<b>0.0657</b>		<b>322.1636</b>	<b>322.1636</b>	<b>0.0159</b>		<b>322.5614</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7233	0.0000	7.7233	4.2454	0.0000	4.2454			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0380		0.0621	0.0621		0.0621	0.0621	0.0000	3,831.6239	3,831.6239	1.1928		3,861.4448
Total	0.4656	2.0175	20.8690	0.0380	7.7233	0.0621	7.7854	4.2454	0.0621	4.3075	0.0000	3,831.6239	3,831.6239	1.1928		3,861.4448

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4913	0.1473	1.0300e-003	0.0240	3.5100e-003	0.0275	6.9700e-003	3.3600e-003	0.0103		109.6599	109.6599	7.9100e-003		109.8578
Worker	0.1101	0.0831	0.8951	2.1400e-003	0.1855	1.7900e-003	0.1873	0.0495	1.6500e-003	0.0512		212.5037	212.5037	8.0000e-003		212.7036
Total	0.1293	0.5745	1.0424	3.1700e-003	0.2094	5.3000e-003	0.2147	0.0565	5.0100e-003	0.0615		322.1636	322.1636	0.0159		322.5614



### 3.5 Grading - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.7733	30.6725	16.5770	0.0297		1.5513	1.5513		1.4272	1.4272		2,988.0216	2,988.0216	0.9302		3,011.2769
<b>Total</b>	<b>2.7733</b>	<b>30.6725</b>	<b>16.5770</b>	<b>0.0297</b>	<b>6.5523</b>	<b>1.5513</b>	<b>8.1037</b>	<b>3.3675</b>	<b>1.4272</b>	<b>4.7947</b>		<b>2,988.0216</b>	<b>2,988.0216</b>	<b>0.9302</b>		<b>3,011.2769</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4913	0.1473	1.0300e-003	0.0256	3.5100e-003	0.0291	7.3700e-003	3.3600e-003	0.0107		109.6599	109.6599	7.9100e-003		109.8578
Worker	0.0917	0.0693	0.7459	1.7800e-003	0.1677	1.4900e-003	0.1692	0.0445	1.3800e-003	0.0458		177.0864	177.0864	6.6600e-003		177.2530
<b>Total</b>	<b>0.1109</b>	<b>0.5606</b>	<b>0.8932</b>	<b>2.8100e-003</b>	<b>0.1933</b>	<b>5.0000e-003</b>	<b>0.1983</b>	<b>0.0518</b>	<b>4.7400e-003</b>	<b>0.0566</b>		<b>286.7463</b>	<b>286.7463</b>	<b>0.0146</b>		<b>287.1108</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8011	0.0000	2.8011	1.4396	0.0000	1.4396			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0297		0.0484	0.0484		0.0484	0.0484	0.0000	2,988.0216	2,988.0216	0.9302		3,011.2769
Total	0.3632	1.5737	17.7527	0.0297	2.8011	0.0484	2.8495	1.4396	0.0484	1.4880	0.0000	2,988.0216	2,988.0216	0.9302		3,011.2769

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4913	0.1473	1.0300e-003	0.0240	3.5100e-003	0.0275	6.9700e-003	3.3600e-003	0.0103		109.6599	109.6599	7.9100e-003		109.8578
Worker	0.0917	0.0693	0.7459	1.7800e-003	0.1546	1.4900e-003	0.1560	0.0413	1.3800e-003	0.0426		177.0864	177.0864	6.6600e-003		177.2530
Total	0.1109	0.5606	0.8932	2.8100e-003	0.1785	5.0000e-003	0.1835	0.0482	4.7400e-003	0.0530		286.7463	286.7463	0.0146		287.1108

### 3.6 Grading Haul - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0946	0.0000	0.0946	0.0143	0.0000	0.0143			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0946</b>	<b>0.0000</b>	<b>0.0946</b>	<b>0.0143</b>	<b>0.0000</b>	<b>0.0143</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0641	34.2431	7.4775	0.0833	1.8281	0.1310	1.9591	0.5011	0.1253	0.6264		9,002.4461	9,002.4461	0.6549		9,018.8182
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>1.0641</b>	<b>34.2431</b>	<b>7.4775</b>	<b>0.0833</b>	<b>1.8281</b>	<b>0.1310</b>	<b>1.9591</b>	<b>0.5011</b>	<b>0.1253</b>	<b>0.6264</b>		<b>9,002.4461</b>	<b>9,002.4461</b>	<b>0.6549</b>		<b>9,018.8182</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0404	0.0000	0.0404	6.1200e-003	0.0000	6.1200e-003			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0404	0.0000	0.0404	6.1200e-003	0.0000	6.1200e-003	0.0000	0.0000	0.0000	0.0000		0.0000

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0641	34.2431	7.4775	0.0833	1.7037	0.1310	1.8347	0.4706	0.1253	0.5959		9,002.4461	9,002.4461	0.6549		9,018.8182
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.0641	34.2431	7.4775	0.0833	1.7037	0.1310	1.8347	0.4706	0.1253	0.5959		9,002.4461	9,002.4461	0.6549		9,018.8182

### 3.7 Trenching - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5322	5.2595	4.6734	6.2100e-003		0.3726	0.3726		0.3428	0.3428		625.5519	625.5519	0.1947		630.4205
<b>Total</b>	<b>0.5322</b>	<b>5.2595</b>	<b>4.6734</b>	<b>6.2100e-003</b>		<b>0.3726</b>	<b>0.3726</b>		<b>0.3428</b>	<b>0.3428</b>		<b>625.5519</b>	<b>625.5519</b>	<b>0.1947</b>		<b>630.4205</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4913	0.1473	1.0300e-003	0.0256	3.5100e-003	0.0291	7.3700e-003	3.3600e-003	0.0107		109.6599	109.6599	7.9100e-003		109.8578
Worker	0.0306	0.0231	0.2486	5.9000e-004	0.0559	5.0000e-004	0.0564	0.0148	4.6000e-004	0.0153		59.0288	59.0288	2.2200e-003		59.0843
<b>Total</b>	<b>0.0498</b>	<b>0.5144</b>	<b>0.3960</b>	<b>1.6200e-003</b>	<b>0.0815</b>	<b>4.0100e-003</b>	<b>0.0855</b>	<b>0.0222</b>	<b>3.8200e-003</b>	<b>0.0260</b>		<b>168.6887</b>	<b>168.6887</b>	<b>0.0101</b>		<b>168.9421</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0760	0.3292	4.6841	6.2100e-003		0.0101	0.0101		0.0101	0.0101	0.0000	625.5519	625.5519	0.1947		630.4205
<b>Total</b>	<b>0.0760</b>	<b>0.3292</b>	<b>4.6841</b>	<b>6.2100e-003</b>		<b>0.0101</b>	<b>0.0101</b>		<b>0.0101</b>	<b>0.0101</b>	<b>0.0000</b>	<b>625.5519</b>	<b>625.5519</b>	<b>0.1947</b>		<b>630.4205</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4913	0.1473	1.0300e-003	0.0240	3.5100e-003	0.0275	6.9700e-003	3.3600e-003	0.0103		109.6599	109.6599	7.9100e-003		109.8578
Worker	0.0306	0.0231	0.2486	5.9000e-004	0.0515	5.0000e-004	0.0520	0.0138	4.6000e-004	0.0142		59.0288	59.0288	2.2200e-003		59.0843
<b>Total</b>	<b>0.0498</b>	<b>0.5144</b>	<b>0.3960</b>	<b>1.6200e-003</b>	<b>0.0755</b>	<b>4.0100e-003</b>	<b>0.0795</b>	<b>0.0207</b>	<b>3.8200e-003</b>	<b>0.0245</b>		<b>168.6887</b>	<b>168.6887</b>	<b>0.0101</b>		<b>168.9421</b>

### 3.8 Landscaping & Field Lighting - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5789	17.4216	6.7126	0.0133		0.8474	0.8474		0.7796	0.7796		1,341.0686	1,341.0686	0.4175		1,351.5059
<b>Total</b>	<b>1.5789</b>	<b>17.4216</b>	<b>6.7126</b>	<b>0.0133</b>		<b>0.8474</b>	<b>0.8474</b>		<b>0.7796</b>	<b>0.7796</b>		<b>1,341.0686</b>	<b>1,341.0686</b>	<b>0.4175</b>		<b>1,351.5059</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0336	0.8599	0.2578	1.8000e-003	0.0448	6.1400e-003	0.0510	0.0129	5.8800e-003	0.0188		191.9049	191.9049	0.0139		192.2511
Worker	0.1101	0.0831	0.8951	2.1400e-003	0.2012	1.7900e-003	0.2030	0.0534	1.6500e-003	0.0550		212.5037	212.5037	8.0000e-003		212.7036
<b>Total</b>	<b>0.1436</b>	<b>0.9430</b>	<b>1.1529</b>	<b>3.9400e-003</b>	<b>0.2460</b>	<b>7.9300e-003</b>	<b>0.2539</b>	<b>0.0663</b>	<b>7.5300e-003</b>	<b>0.0738</b>		<b>404.4086</b>	<b>404.4086</b>	<b>0.0219</b>		<b>404.9547</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1634	0.7082	6.3457	0.0133		0.0218	0.0218		0.0218	0.0218	0.0000	1,341.0686	1,341.0686	0.4175		1,351.5059
<b>Total</b>	<b>0.1634</b>	<b>0.7082</b>	<b>6.3457</b>	<b>0.0133</b>		<b>0.0218</b>	<b>0.0218</b>		<b>0.0218</b>	<b>0.0218</b>	<b>0.0000</b>	<b>1,341.0686</b>	<b>1,341.0686</b>	<b>0.4175</b>		<b>1,351.5059</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0336	0.8599	0.2578	1.8000e-003	0.0419	6.1400e-003	0.0481	0.0122	5.8800e-003	0.0181		191.9049	191.9049	0.0139		192.2511
Worker	0.1101	0.0831	0.8951	2.1400e-003	0.1855	1.7900e-003	0.1873	0.0495	1.6500e-003	0.0512		212.5037	212.5037	8.0000e-003		212.7036
<b>Total</b>	<b>0.1436</b>	<b>0.9430</b>	<b>1.1529</b>	<b>3.9400e-003</b>	<b>0.2274</b>	<b>7.9300e-003</b>	<b>0.2353</b>	<b>0.0617</b>	<b>7.5300e-003</b>	<b>0.0692</b>		<b>404.4086</b>	<b>404.4086</b>	<b>0.0219</b>		<b>404.9547</b>



### 3.9 Paving - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4239	14.5184	12.4333	0.0189		0.8370	0.8370		0.7718	0.7718		1,872.5505	1,872.5505	0.5672		1,886.7312
Paving	0.1470					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.5709</b>	<b>14.5184</b>	<b>12.4333</b>	<b>0.0189</b>		<b>0.8370</b>	<b>0.8370</b>		<b>0.7718</b>	<b>0.7718</b>		<b>1,872.5505</b>	<b>1,872.5505</b>	<b>0.5672</b>		<b>1,886.7312</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1223	0.0923	0.9945	2.3700e-003	0.2236	1.9900e-003	0.2256	0.0593	1.8400e-003	0.0611		236.1152	236.1152	8.8900e-003		236.3373
<b>Total</b>	<b>0.1223</b>	<b>0.0923</b>	<b>0.9945</b>	<b>2.3700e-003</b>	<b>0.2236</b>	<b>1.9900e-003</b>	<b>0.2256</b>	<b>0.0593</b>	<b>1.8400e-003</b>	<b>0.0611</b>		<b>236.1152</b>	<b>236.1152</b>	<b>8.8900e-003</b>		<b>236.3373</b>

### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3076	1.5032	13.9949	0.0189		0.0510	0.0510		0.0510	0.0510	0.0000	1,872.5505	1,872.5505	0.5672		1,886.7312
Paving	0.1470					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.4546	1.5032	13.9949	0.0189		0.0510	0.0510		0.0510	0.0510	0.0000	1,872.5505	1,872.5505	0.5672		1,886.7312

### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1223	0.0923	0.9945	2.3700e-003	0.2061	1.9900e-003	0.2081	0.0550	1.8400e-003	0.0568		236.1152	236.1152	8.8900e-003		236.3373
Total	0.1223	0.0923	0.9945	2.3700e-003	0.2061	1.9900e-003	0.2081	0.0550	1.8400e-003	0.0568		236.1152	236.1152	8.8900e-003		236.3373

### 3.10 Architectural Coating - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.7493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
<b>Total</b>	<b>1.0480</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>		<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>		<b>282.1171</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.2600e-003	0.0728	0.0159	1.8000e-004	3.8900e-003	2.8000e-004	4.1600e-003	1.0600e-003	2.7000e-004	1.3300e-003		19.1325	19.1325	1.3900e-003		19.1673
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0245	0.0185	0.1989	4.7000e-004	0.0447	4.0000e-004	0.0451	0.0119	3.7000e-004	0.0122		47.2230	47.2230	1.7800e-003		47.2675
<b>Total</b>	<b>0.0267</b>	<b>0.0913</b>	<b>0.2148</b>	<b>6.5000e-004</b>	<b>0.0486</b>	<b>6.8000e-004</b>	<b>0.0493</b>	<b>0.0129</b>	<b>6.4000e-004</b>	<b>0.0136</b>		<b>66.3556</b>	<b>66.3556</b>	<b>3.1700e-003</b>		<b>66.4348</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.7493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
<b>Total</b>	<b>1.0480</b>	<b>2.0058</b>	<b>1.8542</b>	<b>2.9700e-003</b>		<b>0.1506</b>	<b>0.1506</b>		<b>0.1506</b>	<b>0.1506</b>	<b>0.0000</b>	<b>281.4485</b>	<b>281.4485</b>	<b>0.0267</b>		<b>282.1171</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.2600e-003	0.0728	0.0159	1.8000e-004	3.6200e-003	2.8000e-004	3.9000e-003	1.0000e-003	2.7000e-004	1.2700e-003		19.1325	19.1325	1.3900e-003		19.1673
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0245	0.0185	0.1989	4.7000e-004	0.0412	4.0000e-004	0.0416	0.0110	3.7000e-004	0.0114		47.2230	47.2230	1.7800e-003		47.2675
<b>Total</b>	<b>0.0267</b>	<b>0.0913</b>	<b>0.2148</b>	<b>6.5000e-004</b>	<b>0.0448</b>	<b>6.8000e-004</b>	<b>0.0455</b>	<b>0.0120</b>	<b>6.4000e-004</b>	<b>0.0126</b>		<b>66.3556</b>	<b>66.3556</b>	<b>3.1700e-003</b>		<b>66.4348</b>

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## Wilson Midle School Operation - Los Angeles-South Coast County, Annual

**Wilson Midle School Operation**  
**Los Angeles-South Coast County, Annual**

**1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior High School	1.65	1000sqft	0.04	1,650.00	0
Other Asphalt Surfaces	42.15	1000sqft	0.97	42,145.00	0
Other Non-Asphalt Surfaces	123.92	1000sqft	2.84	0.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	12			<b>Operational Year</b>	2018
<b>Utility Company</b>	User Defined				
<b>CO2 Intensity (lb/MW hr)</b>	383.88	<b>CH4 Intensity (lb/MW hr)</b>	0.095	<b>N2O Intensity (lb/MW hr)</b>	0.012

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics - \*\*City of Glendale Power Mix from California Department of Energy. Utility Annual Power Content Labels for 2016. 2016 City of Glendale Power Content Label: <http://www.energy.ca.gov/data/labels/>  
 Land Use - See CalEEMod Assumptions

Off-road Equipment -  
 Off-road Equipment -  
 Off-road Equipment -  
 Off-road Equipment -  
 Off-road Equipment -

Off-road Equipment -

Trips and VMT - See CalEEMod Assumptions

Demolition -

Grading -

Architectural Coating - See CalEEMod Assumptions

Vehicle Trips - See CalEEMod Assumptions

Area Coating - SCAQMD Rule 1113

Energy Use -

Water And Wastewater - See CalEEMod Assumptions

Solid Waste - No additional solid waste

Construction Off-road Equipment Mitigation - See CalEEMod Assumptions

Energy Mitigation -

Water Mitigation -

Fleet Mix - See CalEEMod Assumptions

Construction Phase -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	2,529.00	9,964.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblFleetMix	HHD	0.03	3.9670e-003
tblFleetMix	LDA	0.55	0.67
tblFleetMix	LDT1	0.05	0.06
tblFleetMix	LDT2	0.20	0.24
tblFleetMix	LHD1	0.02	2.5420e-003
tblFleetMix	LHD2	5.9530e-003	8.5500e-004
tblFleetMix	MCY	4.8040e-003	6.4480e-003
tblFleetMix	MDV	0.13	0.01
tblFleetMix	MH	9.4400e-004	0.00

tblFleetMix	MHD	0.02	2.6370e-003
tblFleetMix	OBUS	2.3410e-003	0.00
tblFleetMix	SBUS	6.6700e-004	0.00
tblFleetMix	UBUS	2.5830e-003	0.00
tblLandUse	LandUseSquareFeet	42,150.00	42,145.00
tblLandUse	LandUseSquareFeet	123,920.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0	0.095
tblProjectCharacteristics	CO2IntensityFactor	0	383.88
tblProjectCharacteristics	N2OIntensityFactor	0	0.012
tblSolidWaste	SolidWasteGenerationRate	2.15	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,673.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	7.00	27.00
tblTripsAndVMT	WorkerTripNumber	18.00	70.00
tblTripsAndVMT	WorkerTripNumber	4.00	14.00
tblVehicleTrips	ST_TR	0.00	142.86
tblVehicleTrips	SU_TR	0.00	142.86
tblVehicleTrips	WD_TR	13.78	110.64
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

## 2.0 Emissions Summary

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2017	3-31-2017	1.6258	1.6258
2	4-1-2017	6-30-2017	1.1084	1.1084
3	7-1-2017	9-30-2017	1.1206	1.1206
4	10-1-2017	12-31-2017	1.1239	1.1239
5	1-1-2018	3-31-2018	0.2344	0.2344
		Highest	1.6258	1.6258

## 2.2 Overall Operational

### Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	9.5700e-003	2.0000e-005	2.1700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.1600e-003	4.1600e-003	1.0000e-005	0.0000	4.4500e-003
Energy	9.0000e-005	8.4000e-004	7.1000e-004	1.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	2.6166	2.6166	4.4000e-004	7.0000e-005	2.6484
Mobile	0.0778	0.1417	1.1356	2.9200e-003	0.2660	2.4000e-003	0.2684	0.0707	2.2300e-003	0.0729	0.0000	263.9619	263.9619	0.0109	0.0000	264.2338
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0120	0.2464	0.2584	1.0000e-004	3.0000e-005	0.2711
Total	0.0874	0.1425	1.1385	2.9300e-003	0.2660	2.4700e-003	0.2685	0.0707	2.3000e-003	0.0730	0.0120	266.8290	266.8411	0.0114	1.0000e-004	267.1577



Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	9.5700e-003	2.0000e-005	2.1700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.1600e-003	4.1600e-003	1.0000e-005	0.0000	4.4500e-003
Energy	9.0000e-005	8.4000e-004	7.1000e-004	1.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	2.6166	2.6166	4.4000e-004	7.0000e-005	2.6484
Mobile	0.0778	0.1417	1.1356	2.9200e-003	0.2660	2.4000e-003	0.2684	0.0707	2.2300e-003	0.0729	0.0000	263.9619	263.9619	0.0109	0.0000	264.2338
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	9.6300e-003	0.2207	0.2303	9.0000e-005	3.0000e-005	0.2408
Total	0.0874	0.1425	1.1385	2.9300e-003	0.2660	2.4700e-003	0.2685	0.0707	2.3000e-003	0.0730	9.6300e-003	266.8033	266.8129	0.0114	1.0000e-004	267.1274

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.02	0.01	0.01	0.09	0.00	0.01

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0778	0.1417	1.1356	2.9200e-003	0.2660	2.4000e-003	0.2684	0.0707	2.2300e-003	0.0729	0.0000	263.9619	263.9619	0.0109	0.0000	264.2338
Unmitigated	0.0778	0.1417	1.1356	2.9200e-003	0.2660	2.4000e-003	0.2684	0.0707	2.2300e-003	0.0729	0.0000	263.9619	263.9619	0.0109	0.0000	264.2338

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior High School	182.56	235.72	235.72	713,388	713,388
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	182.56	235.72	235.72	713,388	713,388

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
Junior High School	16.60	8.40	6.90	72.80	22.20	5.00	63	25	12
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior High School	0.672372	0.056599	0.244582	0.010000	0.002542	0.000855	0.002637	0.003967	0.000000	0.000000	0.006448	0.000000	0.000000
Other Asphalt Surfaces	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944
Other Non-Asphalt Surfaces	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1.7009	1.7009	4.2000e-004	5.0000e-005	1.7272
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1.7009	1.7009	4.2000e-004	5.0000e-005	1.7272
NaturalGas Mitigated	9.0000e-005	8.4000e-004	7.1000e-004	1.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.9157	0.9157	2.0000e-005	2.0000e-005	0.9212
NaturalGas Unmitigated	9.0000e-005	8.4000e-004	7.1000e-004	1.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.9157	0.9157	2.0000e-005	2.0000e-005	0.9212

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior High School	17160	9.0000e-005	8.4000e-004	7.1000e-004	1.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.9157	0.9157	2.0000e-005	2.0000e-005	0.9212
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		9.0000e-005	8.4000e-004	7.1000e-004	1.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.9157	0.9157	2.0000e-005	2.0000e-005	0.9212

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior High School	17160	9.0000e-005	8.4000e-004	7.1000e-004	1.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.9157	0.9157	2.0000e-005	2.0000e-005	0.9212
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		9.0000e-005	8.4000e-004	7.1000e-004	1.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.9157	0.9157	2.0000e-005	2.0000e-005	0.9212

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior High School	9768	1.7009	4.2000e-004	5.0000e-005	1.7272
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		1.7009	4.2000e-004	5.0000e-005	1.7272

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior High School	9768	1.7009	4.2000e-004	5.0000e-005	1.7272
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		1.7009	4.2000e-004	5.0000e-005	1.7272

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	9.5700e-003	2.0000e-005	2.1700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.1600e-003	4.1600e-003	1.0000e-005	0.0000	4.4500e-003
Unmitigated	9.5700e-003	2.0000e-005	2.1700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.1600e-003	4.1600e-003	1.0000e-005	0.0000	4.4500e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	6.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	8.6900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.1000e-004	2.0000e-005	2.1700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.1600e-003	4.1600e-003	1.0000e-005	0.0000	4.4500e-003
Total	9.5800e-003	2.0000e-005	2.1700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.1600e-003	4.1600e-003	1.0000e-005	0.0000	4.4500e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	6.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	8.6900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.1000e-004	2.0000e-005	2.1700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.1600e-003	4.1600e-003	1.0000e-005	0.0000	4.4500e-003
Total	9.5800e-003	2.0000e-005	2.1700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.1600e-003	4.1600e-003	1.0000e-005	0.0000	4.4500e-003

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.2303	9.0000e-005	3.0000e-005	0.2408
Unmitigated	0.2584	1.0000e-004	3.0000e-005	0.2711

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior High School	0.0340247 / 0.087492	0.2584	1.0000e-004	3.0000e-005	0.2711
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.2584	1.0000e-004	3.0000e-005	0.2711

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior High School	0.0272197 / 0.082155	0.2303	9.0000e-005	3.0000e-005	0.2408
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.2303	9.0000e-005	3.0000e-005	0.2408



8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior High School	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior High School	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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

Wilson Midle School Operation - Los Angeles-South Coast County, Summer

**Wilson Midle School Operation**  
**Los Angeles-South Coast County, Summer**

**1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior High School	1.65	1000sqft	0.04	1,650.00	0
Other Asphalt Surfaces	42.15	1000sqft	0.97	42,145.00	0
Other Non-Asphalt Surfaces	123.92	1000sqft	2.84	0.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	12			<b>Operational Year</b>	2018
<b>Utility Company</b>	User Defined				
<b>CO2 Intensity (lb/MW hr)</b>	383.88	<b>CH4 Intensity (lb/MW hr)</b>	0.095	<b>N2O Intensity (lb/MW hr)</b>	0.012

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics - \*\*City of Glendale Power Mix from California Department of Energy. Utility Annual Power Content Labels for 2016. 2016 City of Glendale Power Content Label: <http://www.energy.ca.gov/data/labels/>

Land Use - See CalEEMod Assumptions

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Trips and VMT - See CalEEMod Assumptions

Demolition -

Grading -

Architectural Coating - See CalEEMod Assumptions

Vehicle Trips - See CalEEMod Assumptions

Area Coating - SCAQMD Rule 1113

Energy Use -

Water And Wastewater - See CalEEMod Assumptions

Solid Waste - No additional solid waste

Construction Off-road Equipment Mitigation - See CalEEMod Assumptions

Energy Mitigation -

Water Mitigation -

Fleet Mix - See CalEEMod Assumptions

Construction Phase -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	2,529.00	9,964.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblFleetMix	HHD	0.03	3.9670e-003
tblFleetMix	LDA	0.55	0.67
tblFleetMix	LDT1	0.05	0.06
tblFleetMix	LDT2	0.20	0.24
tblFleetMix	LHD1	0.02	2.5420e-003
tblFleetMix	LHD2	5.9530e-003	8.5500e-004
tblFleetMix	MCY	4.8040e-003	6.4480e-003
tblFleetMix	MDV	0.13	0.01
tblFleetMix	MH	9.4400e-004	0.00

tblFleetMix	MHD	0.02	2.6370e-003
tblFleetMix	OBUS	2.3410e-003	0.00
tblFleetMix	SBUS	6.6700e-004	0.00
tblFleetMix	UBUS	2.5830e-003	0.00
tblLandUse	LandUseSquareFeet	42,150.00	42,145.00
tblLandUse	LandUseSquareFeet	123,920.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0	0.095
tblProjectCharacteristics	CO2IntensityFactor	0	383.88
tblProjectCharacteristics	N2OIntensityFactor	0	0.012
tblSolidWaste	SolidWasteGenerationRate	2.15	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,673.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	7.00	27.00
tblTripsAndVMT	WorkerTripNumber	18.00	70.00
tblTripsAndVMT	WorkerTripNumber	4.00	14.00
tblVehicleTrips	ST_TR	0.00	142.86
tblVehicleTrips	SU_TR	0.00	142.86
tblVehicleTrips	WD_TR	13.78	110.64
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPerce nt	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPerce nt	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPerce nt	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

## 2.0 Emissions Summary

### Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0530	1.6000e-004	0.0174	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0367	0.0367	1.0000e-004		0.0392
Energy	5.1000e-004	4.6100e-003	3.8700e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5310	5.5310	1.1000e-004	1.0000e-004	5.5639
Mobile	0.5396	0.8452	7.7641	0.0200	1.7771	0.0158	1.7928	0.4713	0.0146	0.4859		1,990.7068	1,990.7068	0.0803		1,992.7136
Total	0.5930	0.8499	7.7853	0.0200	1.7771	0.0162	1.7932	0.4713	0.0150	0.4864		1,996.2745	1,996.2745	0.0805	1.0000e-004	1,998.3167

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0530	1.6000e-004	0.0174	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0367	0.0367	1.0000e-004		0.0392
Energy	5.1000e-004	4.6100e-003	3.8700e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5310	5.5310	1.1000e-004	1.0000e-004	5.5639
Mobile	0.5396	0.8452	7.7641	0.0200	1.7771	0.0158	1.7928	0.4713	0.0146	0.4859		1,990.7068	1,990.7068	0.0803		1,992.7136
Total	0.5930	0.8499	7.7853	0.0200	1.7771	0.0162	1.7932	0.4713	0.0150	0.4864		1,996.2745	1,996.2745	0.0805	1.0000e-004	1,998.3167

[illegible]

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5396	0.8452	7.7641	0.0200	1.7771	0.0158	1.7928	0.4713	0.0146	0.4859		1,990.7068	1,990.7068	0.0803		1,992.7136
Unmitigated	0.5396	0.8452	7.7641	0.0200	1.7771	0.0158	1.7928	0.4713	0.0146	0.4859		1,990.7068	1,990.7068	0.0803		1,992.7136

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior High School	182.56	235.72	235.72	713,388	713,388
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	182.56	235.72	235.72	713,388	713,388

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior High School	16.60	8.40	6.90	72.80	22.20	5.00	63	25	12
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior High School	0.672372	0.056599	0.244582	0.010000	0.002542	0.000855	0.002637	0.003967	0.000000	0.000000	0.006448	0.000000	0.000000
Other Asphalt Surfaces	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944
Other Non-Asphalt Surfaces	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	5.1000e-004	4.6100e-003	3.8700e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5310	5.5310	1.1000e-004	1.0000e-004	5.5639
NaturalGas Unmitigated	5.1000e-004	4.6100e-003	3.8700e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5310	5.5310	1.1000e-004	1.0000e-004	5.5639



5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior High School	47.0137	5.1000e-004	4.6100e-003	3.8700e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5310	5.5310	1.1000e-004	1.0000e-004	5.5639
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		5.1000e-004	4.6100e-003	3.8700e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5310	5.5310	1.1000e-004	1.0000e-004	5.5639

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior High School	0.0470137	5.1000e-004	4.6100e-003	3.8700e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5310	5.5310	1.1000e-004	1.0000e-004	5.5639
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		5.1000e-004	4.6100e-003	3.8700e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5310	5.5310	1.1000e-004	1.0000e-004	5.5639

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0530	1.6000e-004	0.0174	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0367	0.0367	1.0000e-004		0.0392
Unmitigated	0.0530	1.6000e-004	0.0174	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0367	0.0367	1.0000e-004		0.0392

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.7000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0476					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.6600e-003	1.6000e-004	0.0174	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0367	0.0367	1.0000e-004		0.0392
Total	0.0530	1.6000e-004	0.0174	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0367	0.0367	1.0000e-004		0.0392

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.7000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0476					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.6600e-003	1.6000e-004	0.0174	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0367	0.0367	1.0000e-004		0.0392
Total	0.0530	1.6000e-004	0.0174	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0367	0.0367	1.0000e-004		0.0392

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

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### 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

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Wilson Midle School Operation - Los Angeles-South Coast County, Winter

**Wilson Midle School Operation**  
**Los Angeles-South Coast County, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior High School	1.65	1000sqft	0.04	1,650.00	0
Other Asphalt Surfaces	42.15	1000sqft	0.97	42,145.00	0
Other Non-Asphalt Surfaces	123.92	1000sqft	2.84	0.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	12			<b>Operational Year</b>	2018
<b>Utility Company</b>	User Defined				
<b>CO2 Intensity (lb/MW hr)</b>	383.88	<b>CH4 Intensity (lb/MW hr)</b>	0.095	<b>N2O Intensity (lb/MW hr)</b>	0.012

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - \*\*City of Glendale Power Mix from California Department of Energy. Utility Annual Power Content Labels for 2016. 2016 City of Glendale Power Content Label: <http://www.energy.ca.gov/data/labels/>  
 Land Use - See CalEEMod Assumptions

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Trips and VMT - See CalEEMod Assumptions

Demolition -

Grading -

Architectural Coating - See CalEEMod Assumptions

Vehicle Trips - See CalEEMod Assumptions

Area Coating - SCAQMD Rule 1113

Energy Use -

Water And Wastewater - See CalEEMod Assumptions

Solid Waste - No additional solid waste

Construction Off-road Equipment Mitigation - See CalEEMod Assumptions

Energy Mitigation -

Water Mitigation -

Fleet Mix - See CalEEMod Assumptions

Construction Phase -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	2,529.00	9,964.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblFleetMix	HHD	0.03	3.9670e-003
tblFleetMix	LDA	0.55	0.67
tblFleetMix	LDT1	0.05	0.06
tblFleetMix	LDT2	0.20	0.24
tblFleetMix	LHD1	0.02	2.5420e-003
tblFleetMix	LHD2	5.9530e-003	8.5500e-004
tblFleetMix	MCY	4.8040e-003	6.4480e-003
tblFleetMix	MDV	0.13	0.01
tblFleetMix	MH	9.4400e-004	0.00

tblFleetMix	MHD	0.02	2.6370e-003
tblFleetMix	OBUS	2.3410e-003	0.00
tblFleetMix	SBUS	6.6700e-004	0.00
tblFleetMix	UBUS	2.5830e-003	0.00
tblLandUse	LandUseSquareFeet	42,150.00	42,145.00
tblLandUse	LandUseSquareFeet	123,920.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0	0.095
tblProjectCharacteristics	CO2IntensityFactor	0	383.88
tblProjectCharacteristics	N2OIntensityFactor	0	0.012
tblSolidWaste	SolidWasteGenerationRate	2.15	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,673.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	7.00	27.00
tblTripsAndVMT	WorkerTripNumber	18.00	70.00
tblTripsAndVMT	WorkerTripNumber	4.00	14.00
tblVehicleTrips	ST_TR	0.00	142.86
tblVehicleTrips	SU_TR	0.00	142.86
tblVehicleTrips	WD_TR	13.78	110.64
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPerce nt	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPerce nt	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPerce nt	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

## 2.0 Emissions Summary

### Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0530	1.6000e-004	0.0174	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0367	0.0367	1.0000e-004		0.0392
Energy	5.1000e-004	4.6100e-003	3.8700e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5310	5.5310	1.1000e-004	1.0000e-004	5.5639
Mobile	0.5228	0.9079	7.3005	0.0188	1.7771	0.0158	1.7928	0.4713	0.0146	0.4860		1,877.0975	1,877.0975	0.0780		1,879.0469
Total	0.5763	0.9127	7.3217	0.0189	1.7771	0.0162	1.7932	0.4713	0.0150	0.4864		1,882.6653	1,882.6653	0.0782	1.0000e-004	1,884.6500

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0530	1.6000e-004	0.0174	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0367	0.0367	1.0000e-004		0.0392
Energy	5.1000e-004	4.6100e-003	3.8700e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5310	5.5310	1.1000e-004	1.0000e-004	5.5639
Mobile	0.5228	0.9079	7.3005	0.0188	1.7771	0.0158	1.7928	0.4713	0.0146	0.4860		1,877.0975	1,877.0975	0.0780		1,879.0469
Total	0.5763	0.9127	7.3217	0.0189	1.7771	0.0162	1.7932	0.4713	0.0150	0.4864		1,882.6653	1,882.6653	0.0782	1.0000e-004	1,884.6500

[illegible]



4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5228	0.9079	7.3005	0.0188	1.7771	0.0158	1.7928	0.4713	0.0146	0.4860		1,877.0975	1,877.0975	0.0780		1,879.0469
Unmitigated	0.5228	0.9079	7.3005	0.0188	1.7771	0.0158	1.7928	0.4713	0.0146	0.4860		1,877.0975	1,877.0975	0.0780		1,879.0469

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior High School	182.56	235.72	235.72	713,388	713,388
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	182.56	235.72	235.72	713,388	713,388

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior High School	16.60	8.40	6.90	72.80	22.20	5.00	63	25	12
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior High School	0.672372	0.056599	0.244582	0.010000	0.002542	0.000855	0.002637	0.003967	0.000000	0.000000	0.006448	0.000000	0.000000
Other Asphalt Surfaces	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944
Other Non-Asphalt Surfaces	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	5.1000e-004	4.6100e-003	3.8700e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5310	5.5310	1.1000e-004	1.0000e-004	5.5639
NaturalGas Unmitigated	5.1000e-004	4.6100e-003	3.8700e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5310	5.5310	1.1000e-004	1.0000e-004	5.5639

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior High School	47.0137	5.1000e-004	4.6100e-003	3.8700e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5310	5.5310	1.1000e-004	1.0000e-004	5.5639
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>5.1000e-004</b>	<b>4.6100e-003</b>	<b>3.8700e-003</b>	<b>3.0000e-005</b>		<b>3.5000e-004</b>	<b>3.5000e-004</b>		<b>3.5000e-004</b>	<b>3.5000e-004</b>		<b>5.5310</b>	<b>5.5310</b>	<b>1.1000e-004</b>	<b>1.0000e-004</b>	<b>5.5639</b>

### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior High School	0.0470137	5.1000e-004	4.6100e-003	3.8700e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5310	5.5310	1.1000e-004	1.0000e-004	5.5639
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>5.1000e-004</b>	<b>4.6100e-003</b>	<b>3.8700e-003</b>	<b>3.0000e-005</b>		<b>3.5000e-004</b>	<b>3.5000e-004</b>		<b>3.5000e-004</b>	<b>3.5000e-004</b>		<b>5.5310</b>	<b>5.5310</b>	<b>1.1000e-004</b>	<b>1.0000e-004</b>	<b>5.5639</b>

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0530	1.6000e-004	0.0174	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0367	0.0367	1.0000e-004		0.0392
Unmitigated	0.0530	1.6000e-004	0.0174	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0367	0.0367	1.0000e-004		0.0392

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.7000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0476					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.6600e-003	1.6000e-004	0.0174	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0367	0.0367	1.0000e-004		0.0392
Total	0.0530	1.6000e-004	0.0174	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0367	0.0367	1.0000e-004		0.0392

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.7000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0476					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.6600e-003	1.6000e-004	0.0174	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0367	0.0367	1.0000e-004		0.0392
Total	0.0530	1.6000e-004	0.0174	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0367	0.0367	1.0000e-004		0.0392

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

## 10.0 Stationary Equipment

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### Fire Pumps and Emergency Generators

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

### Boilers

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

### User Defined Equipment

Equipment Type	Number
----------------	--------

## 11.0 Vegetation

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## Appendices

### **Appendix D      Noise Data**

## Appendices

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# Noise Background and Modeling Data

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## NOISE

Noise is most often defined as unwanted sound; whether it is loud, unpleasant, unexpected, or otherwise undesirable. Although sound can be easily measured, the perception of noise and the physical response to sound complicate the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as “noisiness” or “loudness.”

### Noise Descriptors

The following are brief definitions of terminology used in this chapter:

- **Sound.** A disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.
- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Decibel (dB).** A unitless measure of sound, expressed on a logarithmic scale and with respect to a defined reference sound pressure. The standard reference pressure is 20 micropascals (20  $\mu\text{Pa}$ ).
- **Vibration Decibel (VdB).** A unitless measure of vibration, expressed on a logarithmic scale and with respect to a defined reference vibration velocity. In the U.S., the standard reference velocity is 1 micro-inch per second ( $1 \times 10^{-6}$  in/sec).
- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- **Equivalent Continuous Noise Level ( $L_{eq}$ ); also called the Energy-Equivalent Noise Level.** The value of an equivalent, steady sound level which, in a stated time period (often over an hour) and at a stated location, has the same A-weighted sound energy as the time-varying sound. Thus, the  $L_{eq}$  metric is a single numerical value that represents the equivalent amount of variable sound energy received by a receptor over the specified duration.
- **Statistical Sound Level ( $L_n$ ).** The sound level that is exceeded “n” percent of time during a given sample period. For example, the  $L_{50}$  level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period); that is, half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the “median sound level.” The  $L_{10}$  level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and this is often known as the “intrusive sound level.” The  $L_{90}$  is the sound level exceeded 90 percent of the time and is often considered the “effective background level” or “residual noise level.”
- **Day-Night Sound Level ( $L_{dn}$  or DNL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 PM to 7:00 AM.
- **Community Noise Equivalent Level (CNEL).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added from 7:00 PM to 10:00 PM and 10 dB from 10:00 PM to 7:00 AM. NOTE: For general community/environmental noise, CNEL and  $L_{dn}$  values rarely differ by more than 1 dB (with the CNEL being only slightly more restrictive – that is, higher than the  $L_{dn}$  value). As a matter of practice,  $L_{dn}$  and CNEL values are interchangeable and are treated as equivalent in this assessment.
- **Sensitive Receptor.** Noise- and vibration-sensitive receptors include land uses where quiet environments are necessary for enjoyment and public health and safety. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, and nursing homes are examples.

## AMBIENT NOISE MONITORING DATA

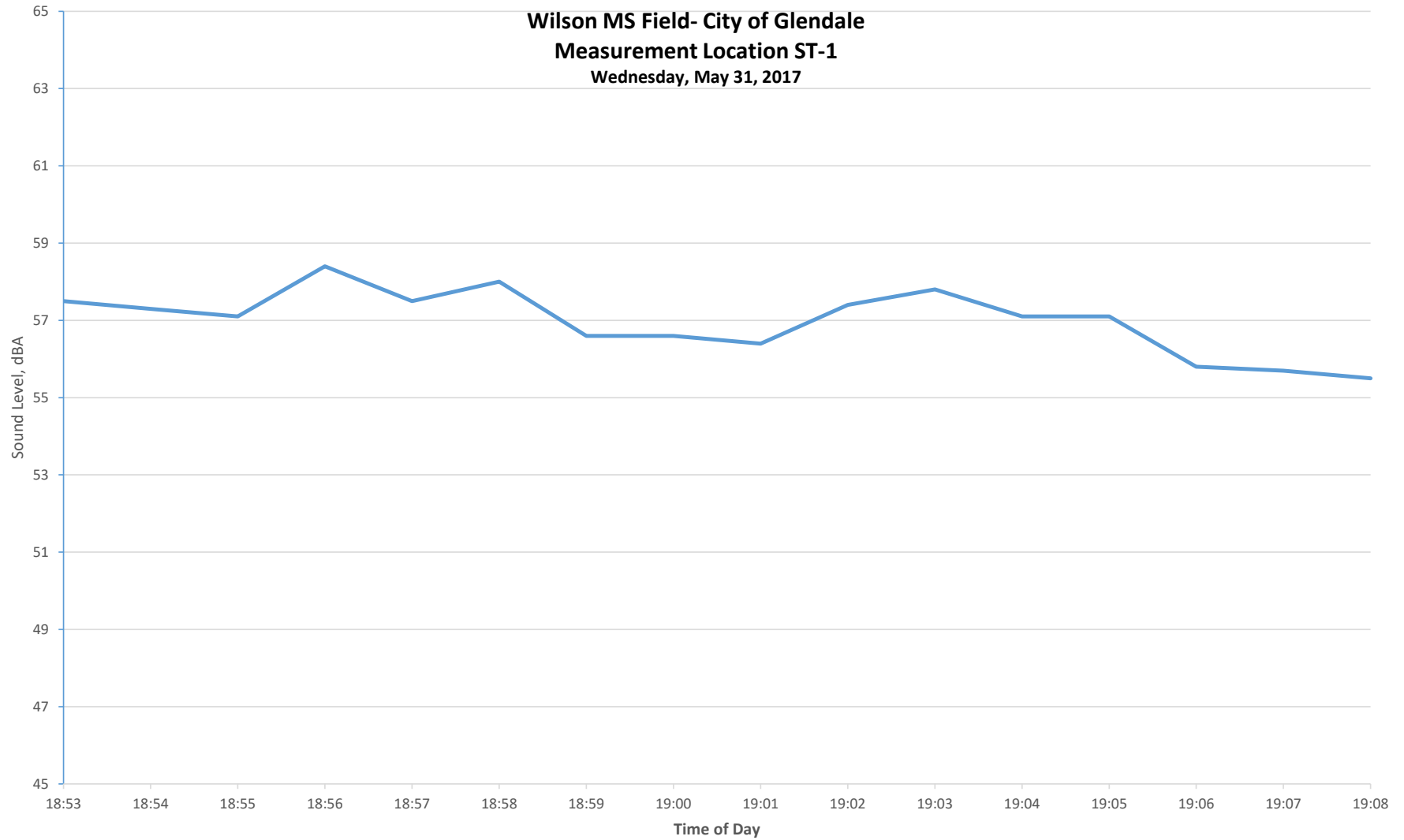
## ST-1 Time History

Date	Time	Level	SEL
-----	-----	----	----
31-May-17	18:53:11	57.5	75.2
31-May-17	18:54:11	57.3	75
31-May-17	18:55:11	57.1	74.9
31-May-17	18:56:11	58.4	76.2
31-May-17	18:57:11	57.5	75.3
31-May-17	18:58:11	58	75.8
31-May-17	18:59:11	56.6	74.4
31-May-17	19:00:11	56.6	74.4
31-May-17	19:01:11	56.4	74.2
31-May-17	19:02:11	57.4	75.2
31-May-17	19:03:11	57.8	75.5
31-May-17	19:04:11	57.1	74.9
31-May-17	19:05:11	57.1	74.9
31-May-17	19:06:11	55.8	73.6
31-May-17	19:07:11	55.7	73.5
31-May-17	19:08:11	55.5	73.3

**15-min Leq** 57.1

ST-1 Intervals												
Date	Time	Duration	Leq	SEL	Lmax	Lmin	L( 2)	L( 8)	L(10)	L(25)	L(50)	L(90)
31-May-17	18:53:11	900	57.1	86.7	64.3	54.5	59.9	58.7	58.6	57.7	56.8	55.4

**Wilson MS Field- City of Glendale**  
**Measurement Location ST-1**  
**Wednesday, May 31, 2017**



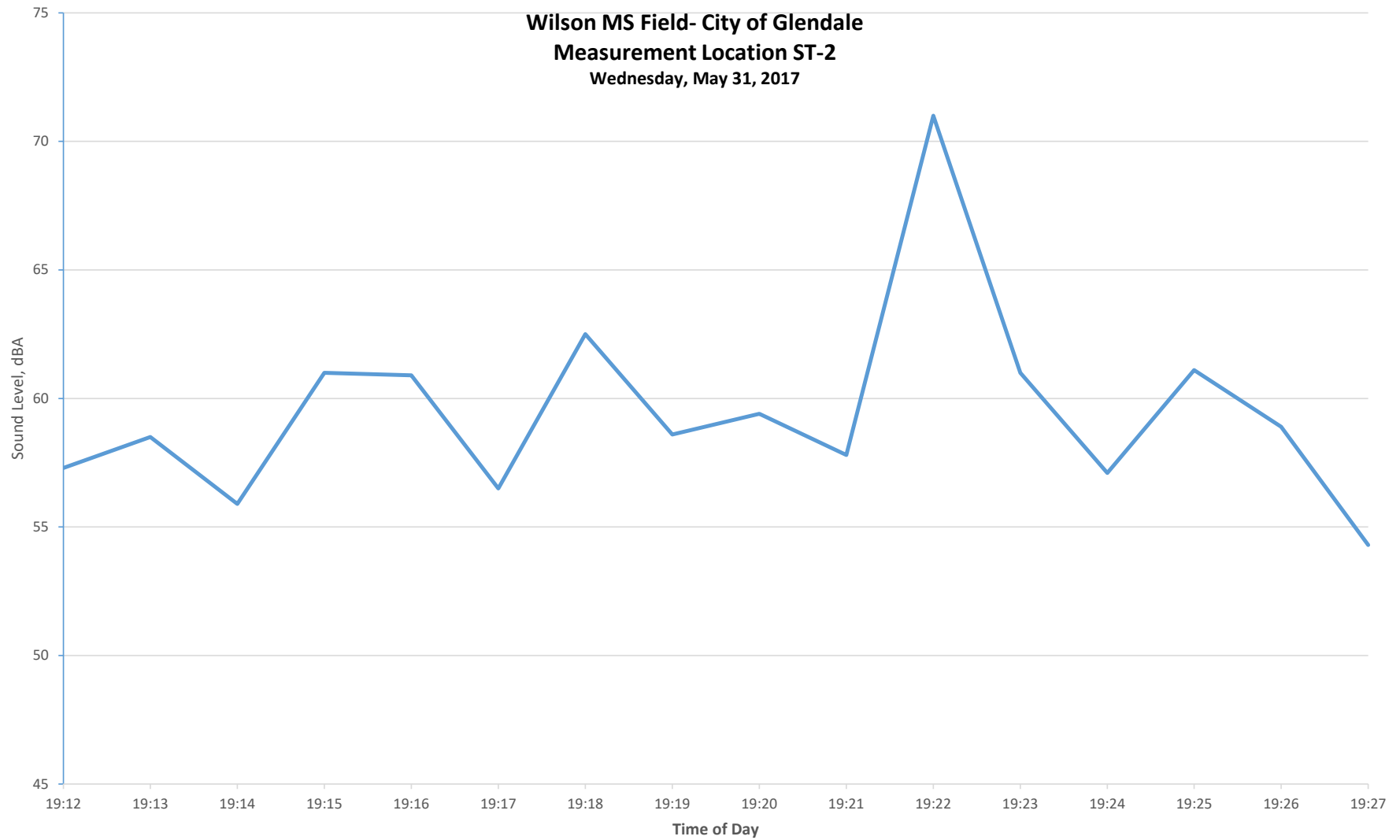
## ST-2 Time History

Date	Time	Level	SEL
-----	-----	----	----
31-May-17	19:12:23	57.3	75.1
31-May-17	19:13:23	58.5	76.3
31-May-17	19:14:23	55.9	73.7
31-May-17	19:15:23	61	78.8
31-May-17	19:16:23	60.9	78.7
31-May-17	19:17:23	56.5	74.3
31-May-17	19:18:23	62.5	80.3
31-May-17	19:19:23	58.6	76.3
31-May-17	19:20:23	59.4	77.2
31-May-17	19:21:23	57.8	75.5
31-May-17	19:22:23	71	88.7
31-May-17	19:23:23	61	78.8
31-May-17	19:24:23	57.1	74.9
31-May-17	19:25:23	61.1	78.9
31-May-17	19:26:23	58.9	76.6
31-May-17	19:27:23	54.3	72

**15-min Leq** 62.2

ST-2 Intervals												
Date	Time	Duration	Leq	SEL	Lmax	Lmin	L( 2)	L( 8)	L(10)	L(25)	L(50)	L(90)
31-May-17	19:12:23	900	62.2	91.7	86.4	47.2	67.8	65.1	64.5	60.6	53.8	49.1

**Wilson MS Field- City of Glendale**  
**Measurement Location ST-2**  
**Wednesday, May 31, 2017**



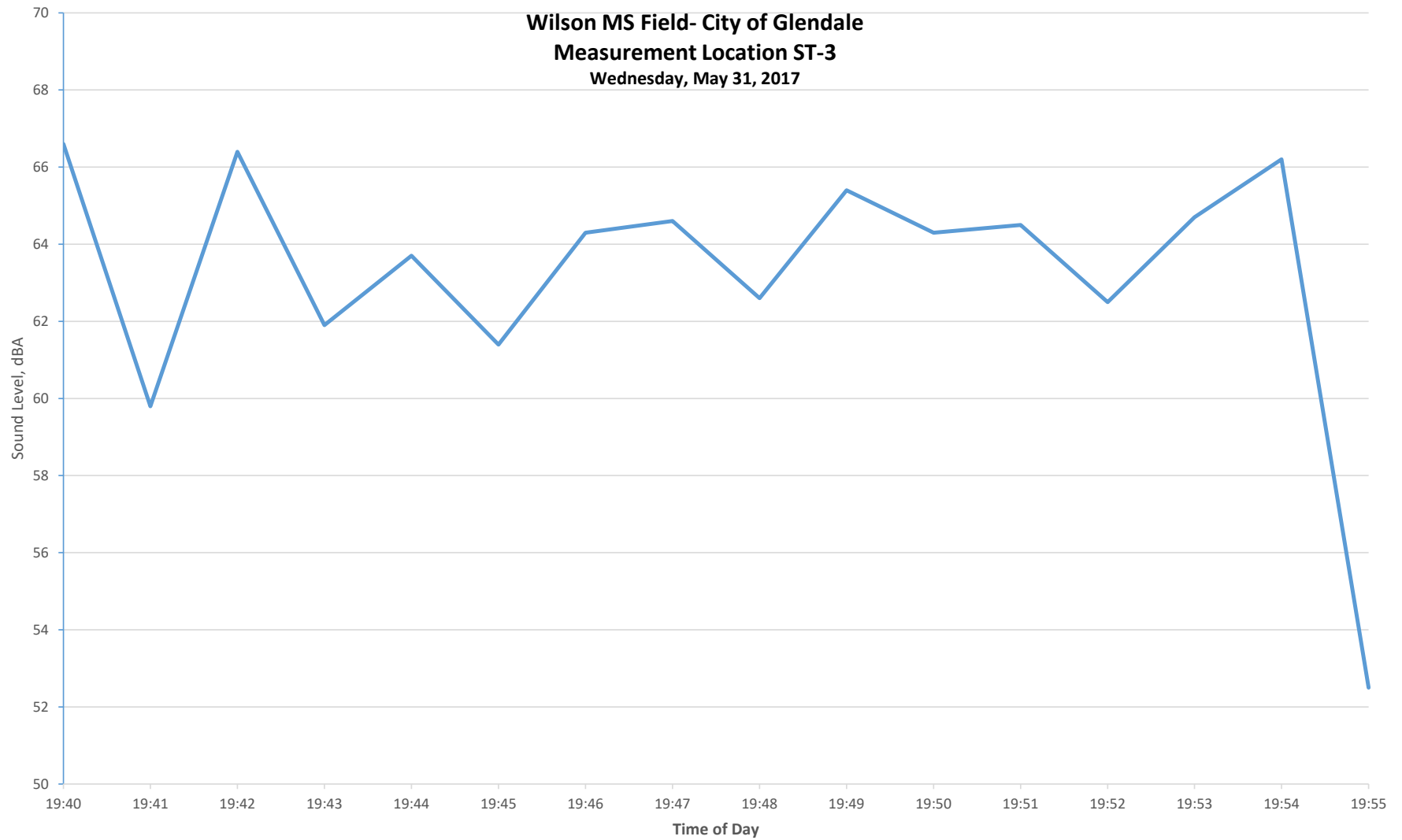
## ST-3 Time History

Date	Time	Level	SEL
-----	-----	----	----
31-May-17	19:40:28	66.6	84.4
31-May-17	19:41:28	59.8	77.6
31-May-17	19:42:28	66.4	84.2
31-May-17	19:43:28	61.9	79.7
31-May-17	19:44:28	63.7	81.4
31-May-17	19:45:28	61.4	79.2
31-May-17	19:46:28	64.3	82.1
31-May-17	19:47:28	64.6	82.4
31-May-17	19:48:28	62.6	80.4
31-May-17	19:49:28	65.4	83.2
31-May-17	19:50:28	64.3	82.1
31-May-17	19:51:28	64.5	82.3
31-May-17	19:52:28	62.5	80.3
31-May-17	19:53:28	64.7	82.5
31-May-17	19:54:28	66.2	84
31-May-17	19:55:28	52.5	70.3

**15-min Leq** 64.3

Date	Time	Duration	Leq	ST-3 Intervals								
				SEL	Lmax	Lmin	L( 2)	L( 8)	L(10)	L(25)	L(50)	L(90)
31-May-17	19:40:28	900	64.3	93.9	76	50.1	71.4	69.1	68.7	66	60.4	51.9

**Wilson MS Field- City of Glendale**  
**Measurement Location ST-3**  
**Wednesday, May 31, 2017**





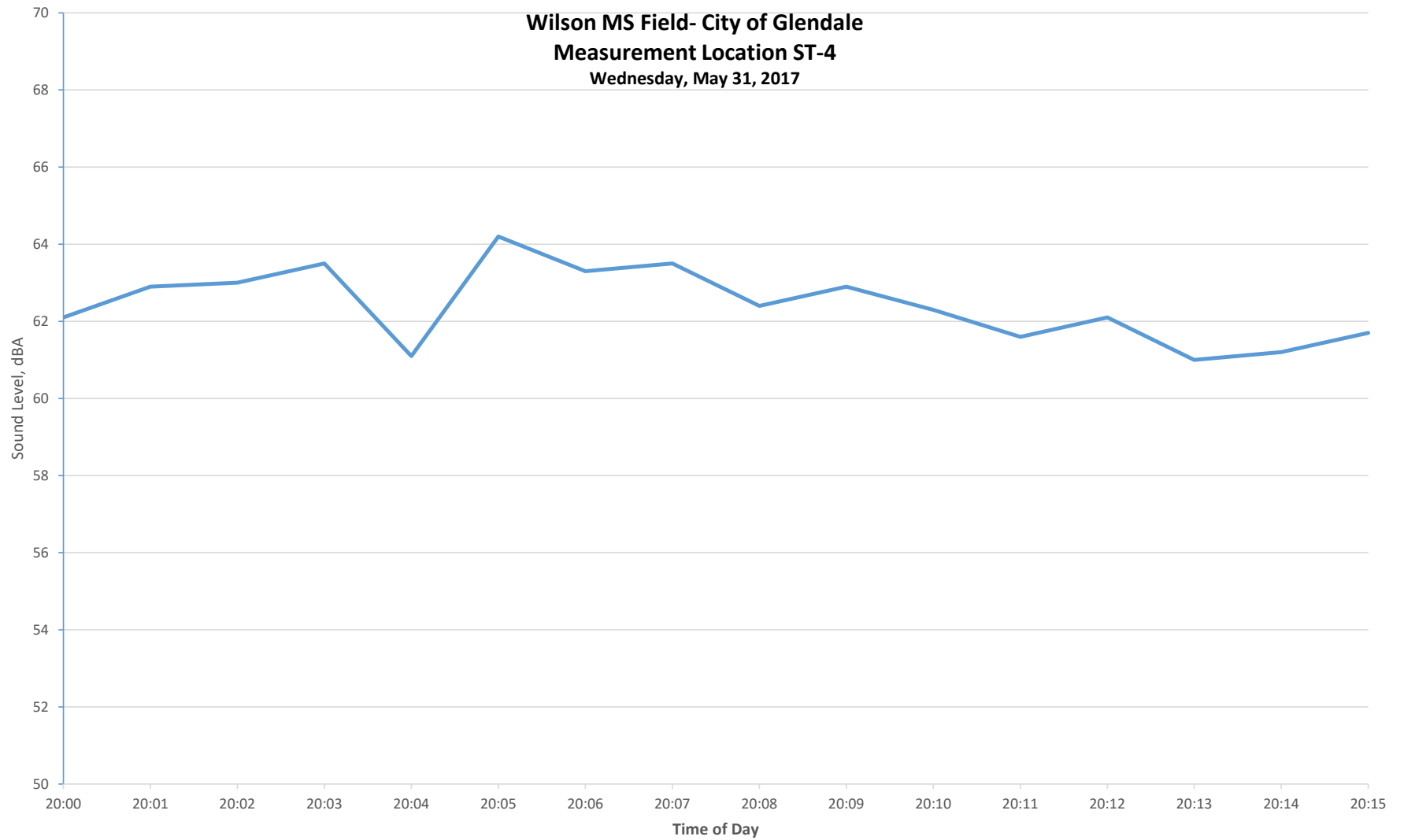
## ST-4 Time History

Date	Time	Level	SEL
-----	-----	----	----
31-May-17	20:00:08	62.1	79.9
31-May-17	20:01:08	62.9	80.7
31-May-17	20:02:08	63	80.8
31-May-17	20:03:08	63.5	81.3
31-May-17	20:04:08	61.1	78.9
31-May-17	20:05:08	64.2	82
31-May-17	20:06:08	63.3	81.1
31-May-17	20:07:08	63.5	81.3
31-May-17	20:08:08	62.4	80.2
31-May-17	20:09:08	62.9	80.7
31-May-17	20:10:08	62.3	80.1
31-May-17	20:11:08	61.6	79.4
31-May-17	20:12:08	62.1	79.9
31-May-17	20:13:08	61	78.8
31-May-17	20:14:08	61.2	79
31-May-17	20:15:08	61.7	79.5

**15-min Leq** 62.6

ST-4 Intervals												
Date	Time	Duration	Leq	SEL	Lmax	Lmin	L( 2)	L( 8)	L(10)	L(25)	L(50)	L(90)
31-May-17	20:00:08	900	62.6	92.1	73.5	58	66.7	64.8	64.5	62.9	61.7	60.2

**Wilson MS Field- City of Glendale**  
**Measurement Location ST-4**  
**Wednesday, May 31, 2017**



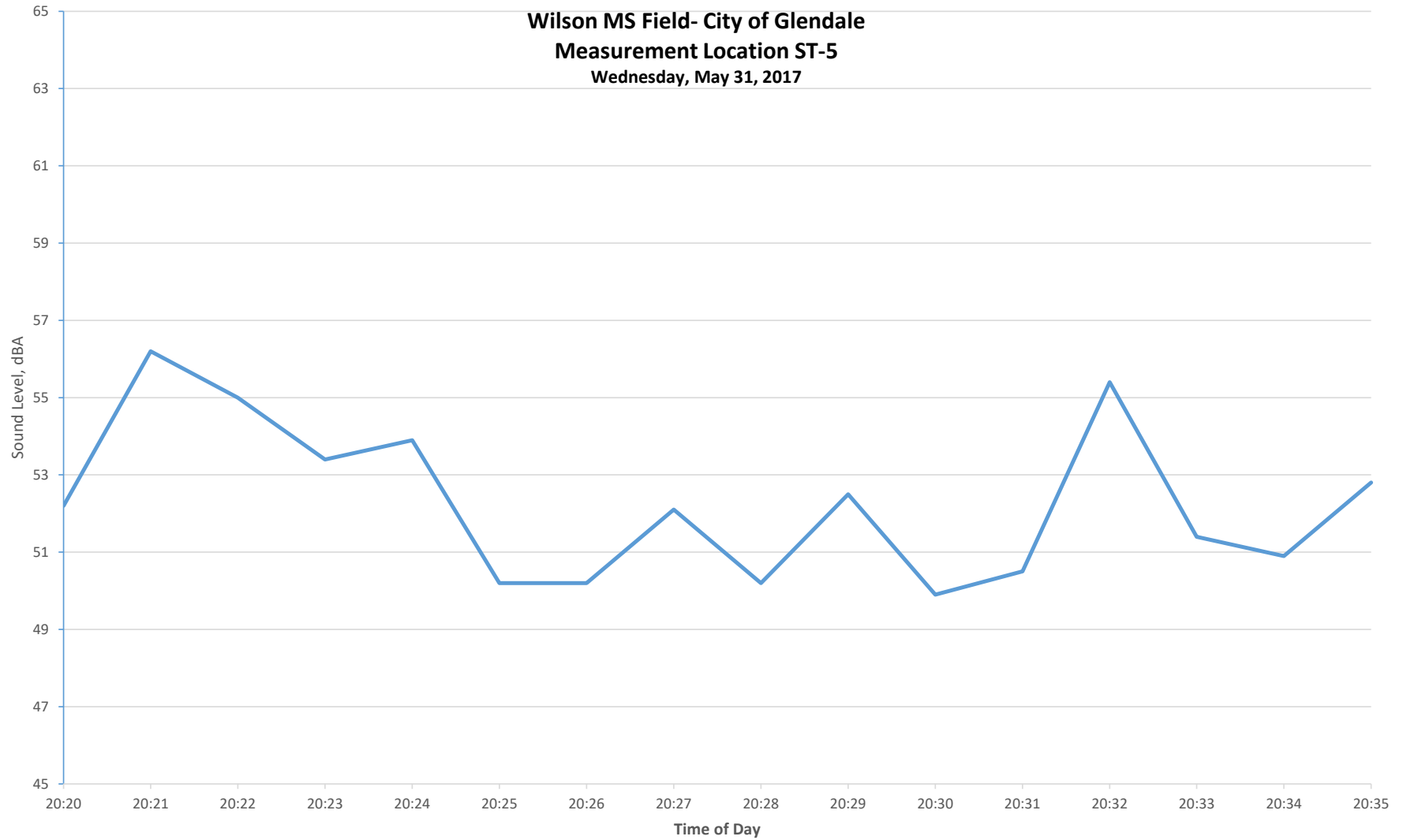
## ST-5 Time History

Date	Time	Level	SEL
-----	-----	----	----
31-May-17	20:20:03	52.2	70
31-May-17	20:21:03	56.2	74
31-May-17	20:22:03	55	72.8
31-May-17	20:23:03	53.4	71.2
31-May-17	20:24:03	53.9	71.7
31-May-17	20:25:03	50.2	67.9
31-May-17	20:26:03	50.2	68
31-May-17	20:27:03	52.1	69.9
31-May-17	20:28:03	50.2	68
31-May-17	20:29:03	52.5	70.3
31-May-17	20:30:03	49.9	67.6
31-May-17	20:31:03	50.5	68.2
31-May-17	20:32:03	55.4	73.2
31-May-17	20:33:03	51.4	69.2
31-May-17	20:34:03	50.9	68.6
31-May-17	20:35:03	52.8	70.6

**15-min Leq** 52.8


ST-5 Intervals												
Date	Time	Duration	Leq	SEL	Lmax	Lmin	L( 2)	L( 8)	L(10)	L(25)	L(50)	L(90)
31-May-17	20:20:03	900	52.8	82.3	66.5	48	59.2	55.7	55	52.4	50.8	49.2

**Wilson MS Field- City of Glendale**  
**Measurement Location ST-5**  
**Wednesday, May 31, 2017**



# CONSTRUCTION AND VIBRATION NOISE CALCULATIONS

Wilson MS Multi-Purpose Field : Construction Noise Calculations			
	Receptor	Spatially AVG Distance(ft)	Worst-case Distance (ft) Land Use Type
1	Residences to North	150	50 Residential
2	Residences to East	250	100 Residential
3	School Buildings to West	-	25 Commercial
4	School Buildings to South	-	25 Commercial

TYPE PHASE NAME >>>			Asphalt Demolition (per 8 hour day)		Site Prep		Grading		Utility Trenching		Paving		Landscaping	
Equipment Item (Dropdown Menu)	Leq @ 50 ft	Lmax @ 50 ft	Quantity	Hours of Usage	Quantity	Hours of Usage	Quantity	Hours of Usage	Quantity	Hours of Usage	Quantity	Hours of Usage	Quantity	Hours of Usage
(RCNM) Concrete Saw	82.6	89.6	1	8		8		8		8		8		8
(RCNM) Excavator	76.7	80.7	3	8		8	1	8		8		8		8
(RCNM) Dozer	77.7	81.7	2	8	3	8	1	8		8		8		8
(RCNM) Flat Bed Truck	70.3	74.3	1	4	1	4	1	4	1	4		8		8
(RCNM) Backhoe	73.6	77.6		8	4	8	3	8	2	8	1	8		8
(RCNM) Grader	81	85		8		8	1	8		8		8		8
(RCNM) Concrete Mixer Truck	74.8	78.8		8		8		8		8	2	6		8
(RCNM) Paver	74.2	77.2		8		8		8		8	1	8		8
(RCNM) Pavement Scarafier	82.5	89.5		8		8		8		8	2	6		8
(RCNM) Roller	73	80		8		8		8		8	2	6		8
(RCNM) Front End Loader	75.1	79.1		8		8		8		8		8	1	8
(RCNM) Crane	72.6	80.6		8		8		8		8		8	1	6
(RCNM) Man Lift	67.7	74.7		8		8		8		8		8	1	6
 <b>PLACEWORKS</b>			Asphalt Demolition		Site Prep		Grading		Utility Trenching		Paving		Landscaping	
	Totals at 50 feet		Total Leq	Lmax	Total Leq	Lmax	Total Leq	Lmax	Total Leq	Lmax	Total Leq	Lmax	Total Leq	Lmax
			86.5	92.0	84.4	88.4	84.9	88.9	77.1	81.1	85.9	92.3	77.0	82.8

Total Leq/Lmax (dBA)														
Sensitive Receptor	Attenuation (-) dB	Asphalt Demolition		Site Prep		Grading		Utility Trenching		Paving		Landscaping		
		Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	
1	Residences to North	5	65.5	73.0	69.8	83.4	70.3	83.9	62.5	76.1	64.9	73.4	62.5	77.8
2	Residences to East		72.5	85.9	70.4	82.4	70.9	82.8	63.1	75.1	71.9	86.3	63.0	76.8

Phase-Specific Distances (feet)															
		Default		Asphalt Demolition		Site Prep		Grading		Utility Trenching		Paving		Landscaping	
		AVG	W-C	AVG	W-C	AVG	W-C	AVG	W-C	AVG	W-C	AVG	W-C	AVG	W-C
1	Residences to North	150	50	315	250	150	50	150	50	150	50	315	250	150	50
2	Residences to East	250	100	250	100	250	100	250	100	250	100	250	100	250	100

Leq measured from spatially averaged distance

Lmax measured from worst-case distance

RCNM Appendix A: Practices for Calculating Estimated Shielding (fwha.dot.gov)

Attenuation (dB)

Instance

3

If a noise barrier or other obstruction (like a dirt mound) just barely breaks the line-of-sight between the noise source and the receptor

5

If the noise source is in a enclosure and/or barrier that has some gaps in it

5

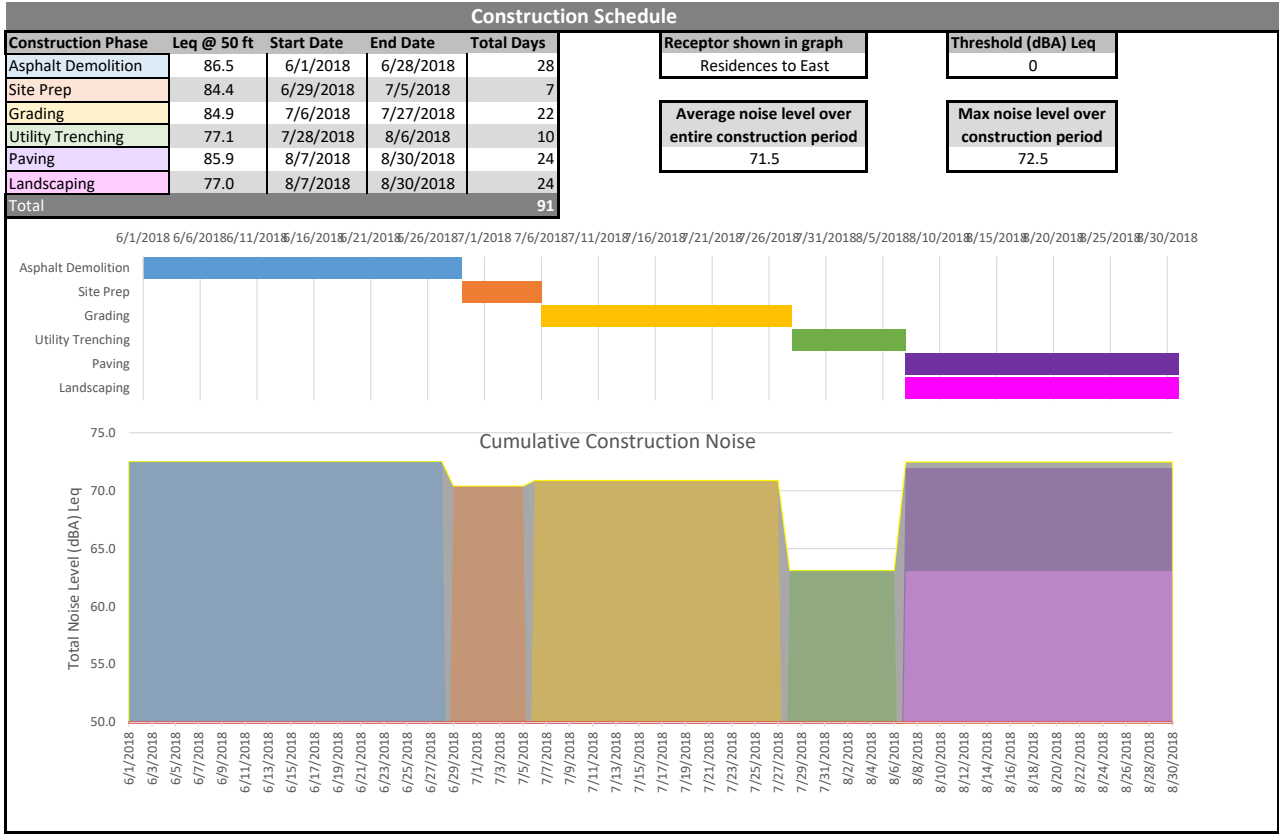
If a noise source is enclosed or shielded with heavy vinyl noise curtain material (e.g., SoundSeal BBC-13-2" or equivalent)

8

If the noise source is completely enclosed OR completely shielded with a solid barrier located close to the source

10

If the noise source is completely enclosed AND completely shielded with a solid barrier located close to the source



Vibration Annoyance				Red Cell indicates level exceeds FTA criteria			
Equipment Item	VdB (re. 1 µ-in/sec) at 25 ft	Distance to (feet)		Residences to North	Residences to East	School Buildings to West	School Buildings to South
		78 VdB	84 VdB				
Vibratory Roller	94	85.4	53.9	70.7	64.0	#VALUE!	#VALUE!
Hoe Ram	87	49.9	31.5	63.7	57.0	#VALUE!	#VALUE!
Large Bulldozer	87	49.9	31.5	63.7	57.0	#VALUE!	#VALUE!
Caisson Drilling	87	49.9	31.5	63.7	57.0	#VALUE!	#VALUE!
Loaded Trucks	86	46.2	29.1	62.7	56.0	#VALUE!	#VALUE!
Jackhammer	79	27.0	17.0	55.7	49.0	#VALUE!	#VALUE!
Small Bulldozer	58	5.4	3.4	34.7	28.0	#VALUE!	#VALUE!
Vibration Damage							
Equipment Item	PPV (in/sec) at 25 ft	Distance to (feet)		Residences to North	Residences to East	School Buildings to West	School Buildings to South
		0.2 PPV	0.3 PPV				
Vibratory Roller	0.21	25.8	19.7	0.074	0.026	0.210	0.210
Hoe Ram	0.089	14.6	11.1	0.031	0.011	0.089	0.089
Large Bulldozer	0.089	14.6	11.1	0.031	0.011	0.089	0.089
Caisson Drilling	0.089	14.6	11.1	0.031	0.011	0.089	0.089
Loaded Trucks	0.076	13.1	10.0	0.027	0.010	0.076	0.076
Jackhammer	0.035	7.8	6.0	0.012	0.004	0.035	0.035
Small Bulldozer	0.003	1.5	1.2	0.001	0.000	0.003	0.003



## TRAFFIC DATA

# Wilson Middle School Athletic Field

## TRAFFIC NOISE CONTOURS RESULT SUMMARY TABLE

#	ROADWAY	SEGMENT	DAILY TRAFFIC VOLUMES	Distance to Reciever	Noise Level (dBA)			DISTANCE TO NOISE CONTOUR (FT.)		
					Leq	Ldn	CNEL	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Monterey Road between Glendale Ave and Verdugo Rd	Existing	5,260	50	57.6	60.4	61.1	13	27	59
2	Verdugo Road between Glenoaks Blvd and Monterey Rd	Existing	10,880	50	62.3	65.2	65.8	26	57	122
3	Glendale Avenue between Glenoaks Blvd and Monterey Rd	Existing	21,210	50	65.6	68.5	69.1	43	94	201
4	Glenoaks Boulevard between Glendale Ave and Verdugo Rd	Existing	5,120	50	57.5	60.3	61.0	13	27	58
5	Adams Street between Glenoaks Blvd and Monterey Rd	Existing	580	50	46.2	49.1	49.7	2	5	10
6	Verdugo Circle north of Glenoaks Blvd	Existing	310	50	41.5	44.3	45.0	1	2	5
7	Monterey Road between Glendale Ave and Verdugo Rd	Future+P	5,632	50	57.9	60.7	61.4	13	29	62
8	Verdugo Road between Glenoaks Blvd and Monterey Rd	Future+P	14,540	50	63.6	66.5	67.1	32	69	148
9	Glendale Avenue between Glenoaks Blvd and Monterey Rd	Future+P	21,960	50	65.7	68.6	69.2	44	96	206
10	Glenoaks Boulevard between Glendale Ave and Verdugo Rd	Future+P	8,580	50	59.7	62.6	63.2	18	38	82
11	Adams Street between Glenoaks Blvd and Monterey Rd	Future+P	618	50	46.5	49.3	50.0	2	5	11
12	Verdugo Circle north of Glenoaks Blvd	Future+P	550	50	43.9	46.8	47.5	2	3	7

### Glendale Athletic Field Traffic Noise Comparison (GLN-02)

Roadway	CNEL			ADT		
	Existing	Future + P	Difference	Existing	Future + P	Difference
Monterey Road between Glendale Ave and Verdugo Rd	61.1	61.4	0.3	5,260	5,632	372
Verdugo Road between Glenoaks Blvd and Monterey Rd	65.8	67.1	1.3	10,880	14,540	3,660
Glendale Avenue between Glenoaks Blvd and Monterey Rd	69.1	69.2	0.2	21,210	21,960	750
Glenoaks Boulevard between Glendale Ave and Verdugo Rd	61.0	63.2	2.2	5,120	8,580	3,460
Adams Street between Glenoaks Blvd and Monterey Rd	49.7	50.0	0.3	580	618	38
Verdugo Circle north of Glenoaks Blvd	45.0	47.5	2.5	310	550	240

## SOUNDPLAN MODELING INPUT AND OUTPUT DATA

## Sound Sources used in noise model: from SoundPLAN 7.4 noise emission library

- Soccer Game: Reference = 62 dBA  $L_w/m^2$ 
  - Main Field = 4,482  $m^2$
  - Practice Field = 1,802  $m^2$
- Spectator (Standing room) = 86 dBA  $L_w/m^2$ 
  - Main Field = 124  $m^2$
  - Practice Field = 55  $m^2$

# Wilson Middle School Multi-Purpose Field

## Assessed receiver levels

### Calculation

2

Receiver	Usage	Fl	Dir	Leq,d dB(A)	Ldn,diff dB(A)	Leq,d,diff dB(A)	Leq,n,diff dB(A)	
MF1	RM	G	SW	51.7				
MF2	RM	G	SW	37.4				
MF3	RM	G F2	SW	45.3 52.3				
MF4	RM	G F2	SW	40.8 46.5				
MF5	RM	G F2	SW	42.4 47.1				
MF6	RM	G F2	SW	47.1 52.9				
MF7	RM	G F2	S	45.2 53.4				
MF8	RM	G F2	SW	46.6 52.5				
MF9	RM	G F2	S	46.9 52.6				
SF1	RS	G F2	S	53.8 54.2				
SF1b	RS	G	S	53.0				
SF2	RS	G F2	S	41.5 49.0				
SF2b	RS	G	S	39.4				
SF3	RS	G F2	W	31.4 45.4				
SF3b	RS	G F2	W	46.3 47.6				
SF4	RS	G F2	W	47.9 48.0				
SF5	RS	G F2	W	48.2 48.2				
SF6	RS	G F2	W	49.2 49.2				
SF7	RS	G F2	W	49.7 49.7				
SF8	RS	G F2	W	33.8 46.9				
SF8b	RS	G F2	W	49.9 50.9				

PlaceWorks 3 MacArthur Place, Ste 1100 Santa Ana, CA 92707 USA

1

# Wilson Middle School Multi-Purpose Field

## Assessed receiver levels

### Calculation

2

Receiver	Usage	Fl	Dir	Leq,d dB(A)	Ldn,diff dB(A)	Leq,d,diff dB(A)	Leq,n,diff dB(A)	
SF9	RS	G F2	W	33.4 46.7				
SF9b	RS	G F2	W	49.3 50.5				
SF10	RS	G F2	W	32.6 45.9				
SF10b	RS	G F2	W	48.5 49.5				

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2

## Appendices

### **Appendix E      Traffic Study**

## Appendices

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June 2020 | Traffic Impact Analysis

# WILSON MIDDLE SCHOOL MULTI-PURPOSE FIELD PROJECT TRAFFIC IMPACT ANALYSIS

*Prepared for:*

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# 1. Introduction

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## 1.1 PROJECT OVERVIEW

The City of Glendale Community Services and Parks Department (City or Glendale) has partnered with the Glendale Unified School District (GUSD) to develop a multipurpose field with sports field lighting on the campus of Wilson Middle School (Wilson MS) at 1221 Monterey Road in the northeast part of Glendale. Figure 1, *Local Vicinity*, and Figure 2, *Aerial Photograph*, depict the area surrounding the school.

Figure 3, *Site Plan*, shows the proposed Project improvements. The existing grass field and paved basketball courts will be redeveloped with a joint-use multipurpose field with soccer and lacrosse markings, a surrounding rubberized surface jogging track, and sports field lighting. The Project site is currently utilized by Wilson MS for physical education purposes and school sports programs. In addition to Wilson MS uses, outside sporting groups have been individually permitted by Glendale Unified School District (GUSD) to use the practice field on weekends generally between the hours of 8:30 a.m. and 6:00 p.m. on Saturdays and 8:00 a.m. and 6:00 p.m. on Sundays.

The proposed field lighting is necessary for evening use on both weeknights and extend use of the field into evening hours on the weekends. The proposed Project will also include the addition of fitness equipment, a perimeter security fence, seating, restroom and storage/maintenance building(s), walkways, landscaping, irrigation, and regrading of the existing basketball court surface. No permanent seating or bleachers are proposed. Wilson Middle School will access the proposed field during school hours, and the City's use of the proposed field would be from 5:00 p.m. to 10:00 p.m. Monday through Friday, and 8:00 a.m. to 10:00 p.m. on Saturday and Sunday.

The Wilson MS Multipurpose Field Project (proposed Project) would disturb approximately 3.85 acres—consisting of the existing athletic field and basketball courts—along the northern portion of the Wilson MS campus and would not impact other areas of the campus. This 3.85 acres will be referred to as the “project site.” The Wilson MS campus is in a medium-density residential community and bordered by Glenoaks Boulevard to the north, Monterey Road to the south, Verdugo Road to the east, and Adams Street to west. The project site is currently used by Wilson MS for physical education purposes and middle school sports programs.

The proposed Project would not expand the school's enrollment capacity, but is expected to increase traffic and parking demand around the project site due to new public use and city programming on weeknights. Regional access to the Wilson MS campus is State Route (SR) 134, approximately 0.13 mile to the south. Main vehicular access to the Wilson MS campus is provided along Monterey Road, including the student drop-off/pick-up zone and faculty/visitor parking located along Monterey Road. Limited parking is provided along the western perimeter of the campus, adjacent the classroom buildings located west of the project site. Street parking is available on Verdugo Road, Monterey Road and Adams Street. The proposed Project would make use of existing street and on-site parking, and no change in site access or parking would occur.

## 1. Introduction

### 1.2 METHODOLOGY

This study was prepared in conformance with the Los Angeles County Congestion Management Plan (CMP) Transportation Impact Analysis Guidelines, City of Glendale's General Plan Circulation Element LOS standards, and based on the anticipated level of traffic from full-capacity athletic events at the project site. A memorandum of understanding (MOU or scoping agreement) was submitted to the City of Glendale Public Works Department on May 12, 2017. The MOU included the methodologies that would be used in the project traffic impact analysis, including trip generation estimates, trip distribution, a list of study area intersections to be evaluated, identification of an ambient growth rate and scenarios to be evaluated, criteria to evaluate levels of service, and thresholds of significance. The City of Glendale traffic engineer reviewed the memorandum of understanding and provided comments on May 19, 2017 (see Appendix A). This traffic impact analysis is consistent with the methodologies and assumptions in the MOU. In 2019, changes of the lane configuration at one of the study intersections occurred. The City of Glendale traffic engineer requested this study be updated to reflect these lane changes and to update the study with more recent traffic and parking counts taken in the fall of 2019. As a result, this study was updated in December 2019 with new traffic counts, parking counts, and cumulative projects.

#### 1.2.1 Intersection LOS

Roadway capacity is generally limited by the ability to move vehicles through intersections. A level of service is a standard performance measurement to describe the operating characteristics of a street system in terms of the level of congestion or delay experienced by motorists. Service levels range from A through F, that is, from the best traffic conditions (uncongested, free-flowing conditions) to the worst (total breakdown with stop-and-go operation). Table 1 describes the level of service concept and the operating conditions expected under each level of service for signalized and unsignalized intersections.

The Intersection Capacity Utilization (ICU) method is used to calculate levels of service (LOS) for signalized intersections in the City of Glendale. The ICU signalized intersection methodology presents LOS in terms of volume to capacity ratio. Signalized intersections under the California Department of Transportation (Caltrans) jurisdiction are evaluated using delay-based methodology consistent with the procedures outlined in the Highway Capacity Manual 6<sup>th</sup> Edition (HCM)

For unsignalized intersections, the Highway Capacity Manual (HCM) methodology is used to calculate LOS. The HCM unsignalized intersection methodology presents LOS in terms of control delay (in seconds per vehicle). Vistro software was used to determine the LOS at the study area intersections.

The intersection LOS analysis uses traffic volumes observed during the peak hour conditions. The peak hours selected for the analysis are the highest volumes that occur in four consecutive 15-minute periods from 4:00 PM to 6:00 PM on weekday evenings.



## 1. Introduction

**Table 1 Intersection Level of Service Descriptions**

LOS	Description	ICU Methodology (Signalized)	HCM Methodology (Signalized)	HCM Methodology (Unsignalized)
		V/C Ratio	Delay (seconds)	Delay (seconds)
A	Level of Service A occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	0.000–0.600	≤ 10.00	≤ 10.00
B	Level of Service B generally occurs with good progression and/or short cycle lengths. More vehicles stop than for Level of Service A, causing higher levels of average total delay.	0.601–0.700	> 10 – 20	>10 to 15
C	Level of Service C generally results when there is fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.	0.701–0.800	> 20 – 35	>15 to 25
D	Level of Service D generally results in noticeable congestion. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	0.801–0.900	> 35 – 55	>25 to 35
E	Level of Service E is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume to capacity ratios. Individual cycle failures are frequent occurrences.	0.901–1.000	> 55 - 80	>35 to 50
F	Level of Service F is considered to be unacceptable to most drivers. This condition often occurs with oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high volume to capacity ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.	Over 1.000	> 80	>50

Source: HCM 6<sup>th</sup> Edition, and 2010 Congestion Management Program for Los Angeles County.

### 1.2.2 Neighborhood Street Segment Analysis

The street segment level of service analysis was conducted by calculating the daily volume-to-capacity (V/C) ratio for each study roadway segment. Traffic volumes were calculated based on turn movement counts at intersections converted to 2-way roadway traffic volumes and applying a typical a peak to daily factor of 10. The environmental capacity for each roadway segment was obtained from the City of Glendale Circulation Plan according to the functional roadway classification and their characteristics. The LOS letter grade was assigned using the corresponding V/C values shown in Table 1.

### 1.2.3 Parking Analysis

A parking analysis was prepared to review the parking conditions in the vicinity of the school and to estimate the parking impacts from the project. Parking counts were taken at the school parking lots and along 26 roadway segments on a weekday evening and on a Saturday.

Parking demand was based on published parking generation rates for a soccer complex. To calculate the expected project-related parking demand, the ITE Parking Generation rates for soccer complexes were

## 1. Introduction

multiplied by the anticipated number of fields. Further details are provided in the Parking Analysis included in Section 5 of this report.

### 1.2.4 Thresholds of Significance

The study area includes intersections under the jurisdictions of the City of Glendale, and the California Department of Transportation (Caltrans).

#### City of Glendale Intersections

According to the City's Circulation Element, the City evaluates zoning in the commercial and industrial areas of the City and establishes floor area ratios based on the availability of existing or proposed street capacity to accommodate future growth. A minimum desired level of service is "D" during afternoon peak hours, except at intersections along major arterials, where a minimum desired level of service is "E".

In the City of Glendale, impacts at signalized intersections are considered significant if the project-related increase in the volume-to-capacity (V/C) ratio equals or exceeds 0.02 at intersections that have LOS D or worse. For unsignalized intersections, the impact is considered significant if the project-related increase in the delay equals or exceeds 3 seconds at intersections that have LOS D, or worse.

#### Caltrans Intersections

Caltrans traffic impact analysis guidelines do not explicitly define a significant impact in terms of existing level of service and change in that level of service. For intersections under Caltrans' jurisdiction, a significant impact would occur at a signalized study intersection when the project-related traffic causes:

- An intersection to degrade from an acceptable LOS to an unacceptable LOS<sup>1</sup>; or
- Any increase in delay for intersections already operating at an unacceptable LOS.

#### Neighborhood Street Segments

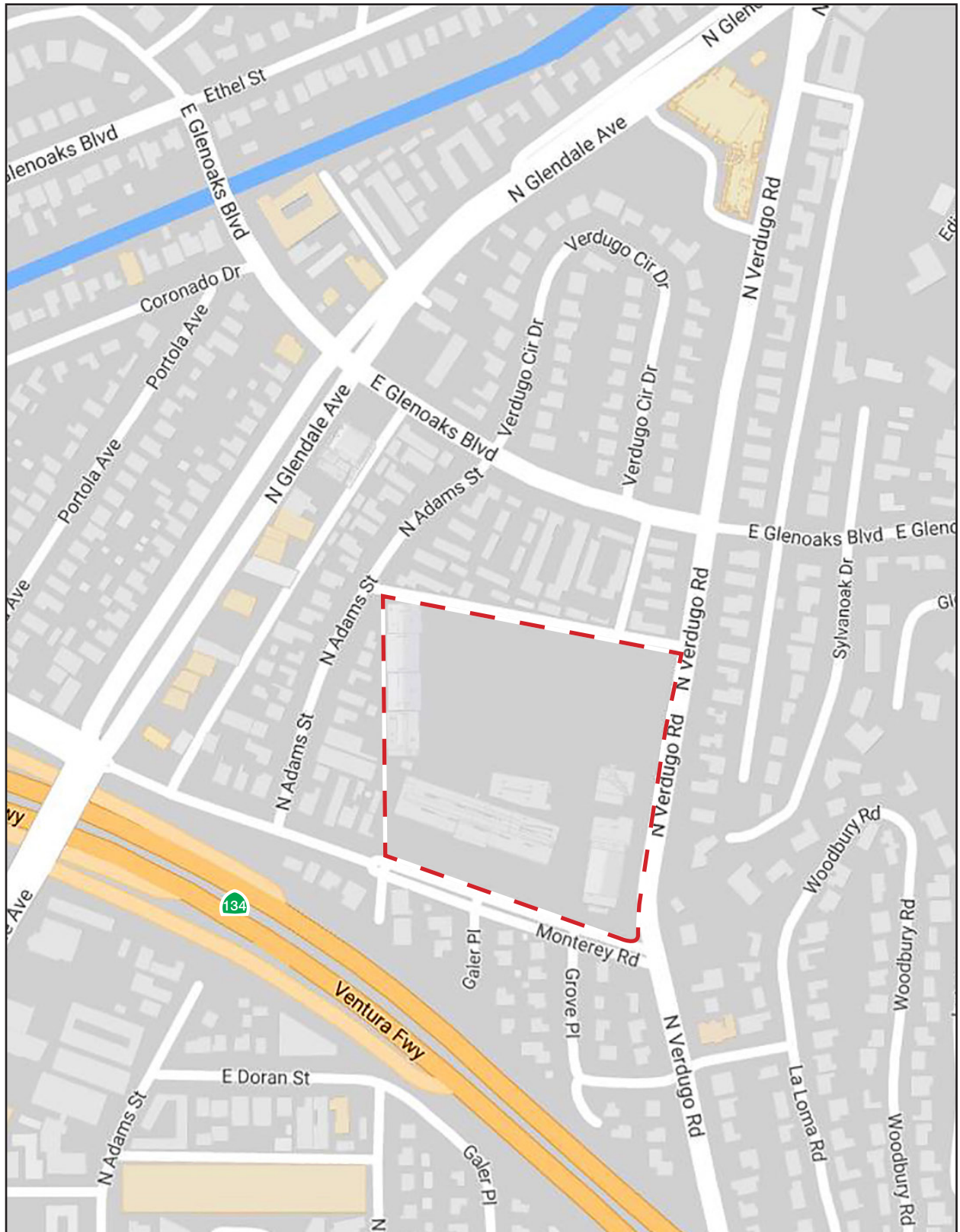
As discussed above, LOS D is the minimum desired level of service. The City of Glendale Circulation Element identifies two conditions that typically apply when evaluating local collector street impacts:

- If the addition of Project average daily trips (ADTs) to a residential street does not cause the street's capacity to be exceeded (regardless of how great an increase), the Project would result in no impacts.
- If the street's capacity is exceeded with or without the Project, no impacts occur if the Project increases the existing conditions ADT by less than 10 percent.

---

<sup>1</sup> The Caltrans Transportation Concept Report states that Caltrans strives for LOS C/D, but generally accepts up to LOS E in urban environments.

Figure 1 - Local Vicinity



--- Project Site

0 300  
Scale (Feet)



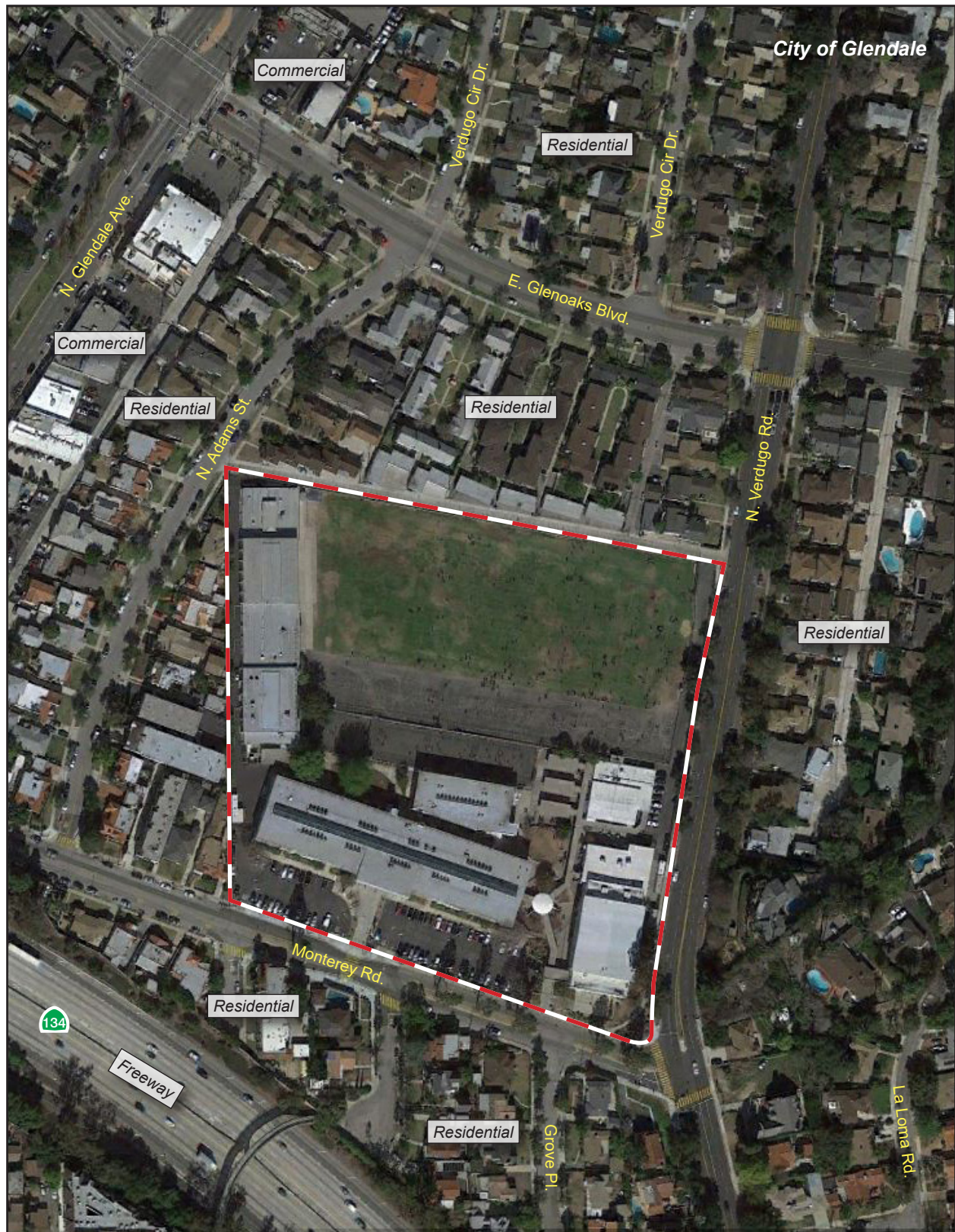
Source: Google Maps, 2017

## 1. Introduction

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Figure 2 - Aerial Photograph



— Project Site

0 300  
Scale (Feet)



Source: Google Maps, 2017

PlaceWorks

## 1. Introduction

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Figure 3 - Site Plan



— Project Site      ⊗ Lighting Locations (6)

0 125  
Scale (Feet)



Source: Google Earth Pro, 2017

## 1. Introduction

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## 2. Existing Conditions

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### 2.1 STUDY AREA ROADWAY NETWORK

The study-area roadways discussed below are based on the City of Glendale General Plan Circulation Element (1998). Exhibit 2-2 of the Circulation Plan, Street Classifications and Characteristics, shows the roadways and classifications in the city. The following describes the surrounding street system based on field observations and according to the roadway functional classifications in the City of Glendale General Plan Circulation Element, shown on Figure 4, *City of Glendale Street Classification Map*.

#### 2.1.1 Surrounding Street System

**State Route 134 (SR-134).** SR-134, also known as Ventura Freeway is a ten-lane east-west freeway that provides regional access to the project site via the on/off ramps at Monterrey Avenue and Glendale Avenue. SR-134 is a part of the Congestion Management Program (CMP) highway network.

**Glendale Avenue.** This north-south roadway has 6 lanes at the segment nearest to the project site. Glendale Avenue is classified as a Major Arterial in the City's General Plan Circulation Element.

**Glenoaks Boulevard.** This east-west roadway has 2 lanes at the segment nearest to the project site. In the vicinity of the site it is classified as a Minor Arterial.

**Monterey Road.** This east-west roadway is the southern boundary of the Wilson MS property, and provides the primary site access to the campus. At the segment nearest to the project site, this roadway varies from 1 to 2 lanes in each direction. Between Verdugo and Glendale Avenue it is classified as an Urban Collector.

**Verdugo Road.** This north-south roadway is the eastern boundary of Wilson MS. This roadway has 4 lanes at the segment nearest to the project site, and is classified as a Major Arterial.

**Adams Street.** This north-south roadway has 2 lanes at the segment nearest to the project site. It is classified as a Local Street.

**Verdugo Circle Drive.** This short 2-lane Local Street extends from Adams Street, and creates a loop road north of Glenoaks Boulevard that provides access to residences.

#### 2.1.2 Study Area Intersections

The study area was defined based on the calculated project trip generation and distribution and in consultation with City of Glendale Transportation Engineering Division staff. The following eight intersections are analyzed in this study. All but two intersections are under the City of Glendale jurisdiction. The two intersections along

## 2. Existing Conditions

the Ventura Freeway Ramps at Monterey Road and Glendale Avenue are under Caltrans' jurisdiction. The following intersections were analyzed:

1. WB Ventura Freeway (SR-134) Ramps at Monterey Road
2. Glendale Avenue at EB Ventura Freeway (SR-134) Ramps
3. Glendale Avenue at Monterey Road
4. Glendale Avenue at Glenoaks Boulevard
5. Adams Street at Monterey Road
6. Adams Street at Glenoaks Boulevard
7. Verdugo Road at Monterey Road
8. Verdugo Road at Glenoaks Boulevard

Figure 5, *Study Area Roadway Network and Intersections*, shows the study area intersections and the number of through lanes for roadways for the study area.

### 2.1.3 Neighborhood Street Segments

Neighborhood street segment analysis has been conducted on the following roadway segments to evaluate environmental capacity:

1. Monterey Road between Glendale Avenue and Verdugo Road
2. Adams Street between Glenoaks Boulevard and Monterey Road

### 2.1.4 Study Area Parking Locations

In addition to the on-site parking lot off Monterey Road, off-site parking is available on public streets in the vicinity of the school. The parking demand along the following 26 roadway segments are analyzed in this study:

1. Briarwood Lane north of Glenoaks Boulevard
2. Glenoaks Boulevard from Briarwood Lane to Sylvanoak Drive
3. Glenoaks Boulevard from Sylvanoak Drive to Glendale Avenue
4. Glenvista Drive south of Glenoaks Boulevard
5. Glenvista Drive north of Glenoaks Boulevard
6. Sylvanoak Drive south of Glenoaks Boulevard
7. Sylvanoak Drive north of Glenoaks Boulevard
8. Verdugo Road from Glendale Avenue to south edge of lot
9. Verdugo Circle Drive north of Glenoaks Boulevard
10. Glendale Avenue from Verdugo Road to Monterey Road
11. Monterey Road from Glendale Avenue to Cordova Avenue
12. Monterey Road from Verdugo Road to Glendale Avenue

## 2. Existing Conditions

13. Woodbury Road from Grove Place to La Loma Road
14. Grove Place south of Monterey Road
15. Galer Place south of Monterey Road
16. Naranja Drive south of Monterey Road
17. Adams Street from Glenoaks Boulevard to Monterey Road
18. Portola Avenue from Monterey Road to Coronado Drive
19. Glenoaks Boulevard from Coronado Drive to Glendale Avenue
20. Doran Street from Glendale Avenue to Adams Street (accessible by bridge over SR-134)
21. Adams Street north of Lexington Drive (accessible by bridge over SR-134)
22. Doran Street from Adams Street to Galer Place (accessible by bridge over SR-134)
23. Naranja Drive from Doran Street to Lexington Drive (accessible by bridge over SR-134)
24. Galer Place from Naranja Drive to Richard Place (accessible by bridge over SR-134)
25. Richard Place from Naranja Drive to Grove Place (accessible by bridge over SR-134)
26. Grove Place north of Lexington Drive (accessible by bridge over SR-134)

Figure 6, *Off-Site Parking Locations*, shows the study area parking locations evaluated in this study.

### 2.2 EXISTING OPERATIONS

Currently, the project site is used on the weekends by American Youth Soccer Organization (AYSO) from 8:00 a.m. to 6:00 p.m. on Saturdays, and 10:00 a.m. to 6:00 p.m. on Sundays. The proposed Project would not increase capacity of the existing Wilson MS field for AYSO use, rather, the proposed Project would allow for evening uses of the field. As such, the proposed Project would not change the number of vehicle trips during the Saturday mid-day peak period. Therefore, and the project would not add trips during the Saturday midday peak hours and is not further evaluated in this analysis. Parking counts were conducted on a typical Saturday to determine if existing use of the fields on weekends currently cause a shortage of parking in the vicinity of the school during the daytime, and if the parking supply can accommodate a potential increase in parking demand due to the project in the evenings on weekdays.

Turn movement volumes for weekday PM peak hour were collected at all the study area intersections. These counts were obtained on Tuesday, October 8, 2019. The turn movement volumes for the study area intersections are provided in Appendix B. Additionally, parking counts were analyzed at the school parking lots and along all off-site parking locations. Parking counts were taken in 30-minute intervals on Saturday, October 5, 2019, 8 AM to 10 PM, and on Tuesday October 8, between 5 PM to 10 PM. All counts occurred on typical weekdays while the school was in session, in the AYSO soccer fall season, and outside holidays and major events.

## 2. Existing Conditions

### 2.2.1 Existing Conditions Intersection Analysis

The weekday PM peak hour intersection operations analysis results for all study area intersections are summarized in Table 2. Intersection turn movement volumes and LOS worksheets for existing conditions are included in Appendix C.

**Table 2 Existing Intersection Levels of Service, Weekday PM Peak Hour**

Intersection	Intersection Control	Acceptable LOS	Weekday PM Peak Hour	
			ICU (V/C) or Average Delay (sec/veh)	LOS
1. WB Ventura Freeway Ramps at Monterey Road	Signal	E	0.849	D
2. Glendale Avenue at EB Ventura Freeway Ramps	Signal	E	0.675	B
3. Glendale Avenue at Monterey Road	Signal	E	0.876	D
4. Glendale Avenue at Glenoaks Boulevard	Signal	E	0.757	C
5. Adams Street at Monterey Road	CCS	D	14.28	B
6. Adams Street at Glenoaks Boulevard	CCS	D	12.79	B
7. Verdugo Road at Monterey Road	Signal	E	0.614	B
8. Verdugo Road at Glenoaks Boulevard	Signal	E	0.511	A

Notes: CCS = Cross-Street Stop.  
LOS worksheets are included in Appendix C.

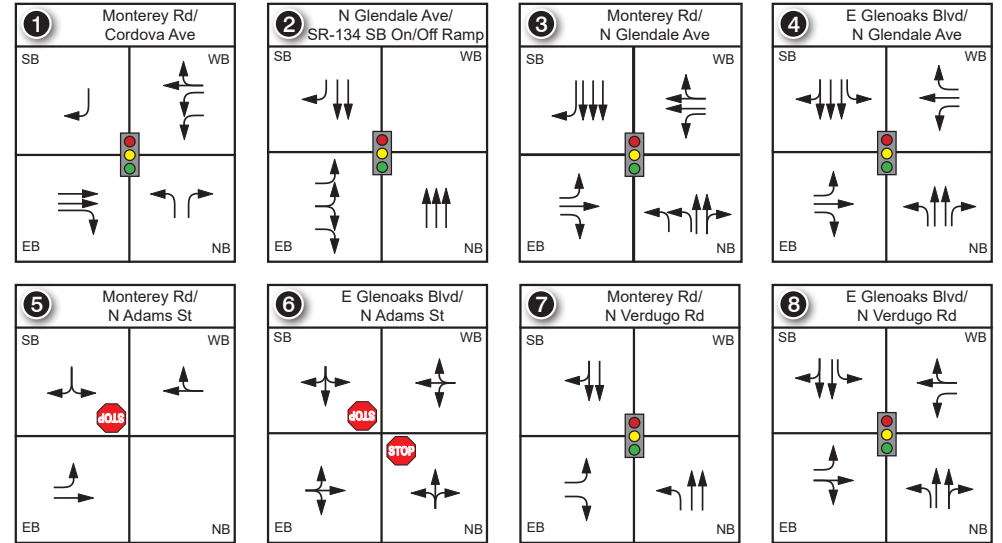
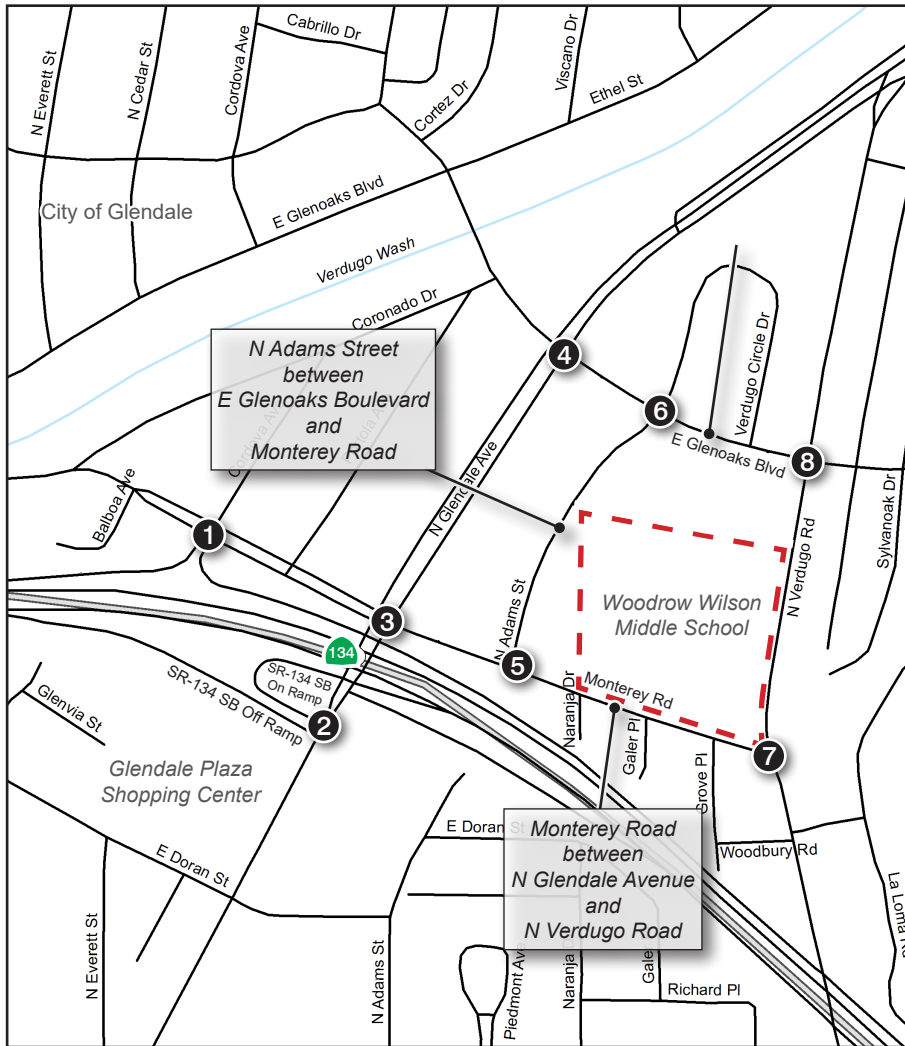
For all study intersections, a minimum desired level of service is “D” during afternoon peak hours is acceptable, except at intersections along major arterials (Glendale Avenue, Verdugo Road), where a minimum desired level of service is “E” is acceptable. As shown on Table 2, all study intersections currently operate at acceptable LOS during the Weekday PM Peak hour.

Source: ESRI, 2017; City of Glendale Planning & Public Works Division

## 2. Existing Conditions

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Figure 5 - Study Area Roadway Network and Intersections



--- Project Boundary

# Study Intersections (8)

STOP One-Way Stop Intersection

Traffic Signal

0 800  
Scale (Feet)



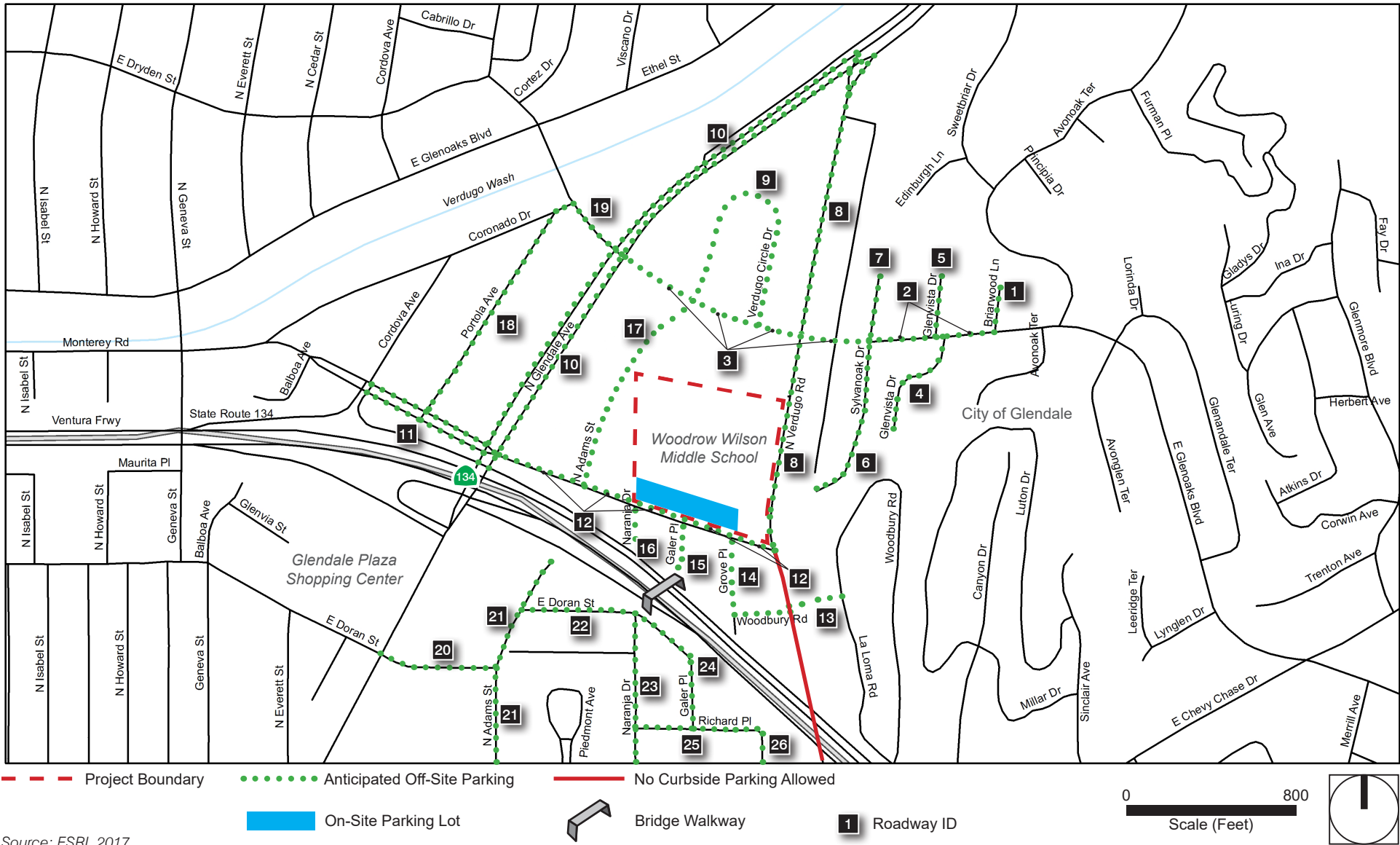
Source: ESRI, 2017

## 2. Existing Conditions

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Figure 6 - Off-Site Parking Locations



Source: ESRI, 2017

## 2. Existing Conditions

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## 2. Existing Conditions

### 2.2.2 Neighborhood Street Segment Analysis

A neighborhood street segment analysis for existing conditions along two study area roadways is presented in Table 3. The daily volumes were calculated based on the intersection PM peak hour turn movement volumes using a peak to daily factor of 10. As shown in Table 3, all study segments operate with volumes well below their daily capacity, with a corresponding LOS A and B, which are acceptable.

**Table 3 Existing Street Segment Volumes**

Street Segment	Functional Classification	Street Layout	Environmental Capacity (vehicles/day) <sup>1</sup>	Day	ADT	V/C	LOS
Monterey Road (Glendale Av to Verdugo Rd)	Urban Collector	2U	10,000	Weekday	6,020	0.602	B
Adams Street (Glenoaks Blvd to Monterey Rd)	Local	2D	2,500	Weekday	560	0.224	A

<sup>1</sup> 2U= 2-lane undivided road, 2D= 2-lane divided road.

<sup>2</sup> Functional Classifications and Environmental Capacity daily volumes obtained from the City of Glendale General Plan Circulation Element.

### 2.2.3 Existing Internal Circulation

Wilson Middle School has two parking lots along Monterey Road. The two parking lots are separated by a walkway that leads to a crosswalk that crosses Monterey Road. Each parking lot has two entrances/exits that allow two-way flow. School staff controls onsite circulation with traffic cones, usually restricting the parking lots to one-way circulation (i.e., enter near the crosswalk, exit on the opposite end), which facilitates onsite circulation, especially during peak periods.

### 2.2.4 Existing Parking Options Serving the Project Site

Parking supply was determined by reviewing the linear feet of curb at each road assuming 25 feet per vehicle. Driveways and areas where parking is prohibited such as red curbs were not included as parking supply. Parking counts were taken on weekday evenings from 5 to 10 PM in 30-minute intervals and between 8 AM to 10 PM on Saturdays. The parking counts were taken at the school parking lots and along both sides of the previously mentioned off-site parking locations, as shown in Figure 6. The parking survey results are included in Appendix D.

Table 4 shows the parking occupancy on weekday and on Saturdays at the hours of lowest occupancy and highest occupancy. On weekdays, the period in which the highest overall occupancy was observed started at 10 PM, and the lowest occupancy period started at 5PM. On a Saturday, the period in which the highest overall occupancy was observed started at 8:30 AM, and the lowest occupancy period started at 6:00 PM. As shown on Table 4 the overall parking occupancy ranges from 59 percent to 75 percent. The school lot has plenty of parking available on weekdays after 5PM and on weekends. In addition, there is unused parking available in several public streets in the vicinity of the school.

## 2. Existing Conditions

**Table 4 Existing Parking Occupancy**

Parking Locations		Weekday		Saturday	
		Highest Occupancy (10PM)	Lowest Occupancy (5PM)	Highest Occupancy (6 PM)	Lowest Occupancy (12:30 PM)
1	Briarwood Lane north of Glenoaks Boulevard	36%	45%	36%	64%
2	Glenoaks Boulevard from Briarwood Lane to Sylvanoak Drive	20%	7%	50%	20%
3	Glenoaks Boulevard from Sylvanoak Drive to Glendale Avenue	84%	57%	93%	80%
4	Glenvista Drive south of Glenoaks Boulevard	13%	13%	17%	17%
5	Glenvista Drive north of Glenoaks Boulevard	43%	21%	64%	57%
6	Sylvanoak Drive south of Glenoaks Boulevard	35%	30%	39%	39%
7	Sylvanoak Drive north of Glenoaks Boulevard	53%	32%	42%	47%
8	Verdugo Road from Glendale Avenue to south edge of lot	94%	66%	99%	87%
9	Verdugo Circle Drive north of Glenoaks Boulevard	74%	62%	76%	58%
10	Glendale Avenue from Verdugo Road to Monterey Road	43%	37%	51%	46%
11	Monterey Road from Glendale Avenue to Cordova Avenue	40%	20%	30%	40%
12	Monterey Road from Verdugo Road to Glendale Avenue	40%	40%	44%	40%
13	Woodbury Road from Grove Place to Woodbury Road	72%	61%	72%	94%
14	Grove Place south of Monterey Road	50%	38%	50%	38%
15	Galer Place south of Monterey Road	53%	35%	18%	35%
16	Naranja Drive south of Monterey Road	71%	14%	71%	29%
17	Adams Street from Glenoaks Boulevard to Monterey Road	97%	71%	97%	92%
18	Portola Avenue from Monterey Road to Cordova Avenue	100%	69%	83%	87%
19	Glenoaks Boulevard from Cordova Avenue to Glendale Avenue	100%	67%	83%	83%
20	Doran Street from Glendale Avenue to Adams Street	80%	77%	80%	83%
21	Adams Street north of Lexington Drive	88%	82%	89%	92%
22	Doran Street from Adams Street to Galer Place	97%	61%	76%	74%
23	Naranja Drive from Doran Street to Lexington Drive	96%	78%	98%	76%
24	Galer Place from Naranja Drive to Richard Place	34%	13%	21%	23%
25	Richard Place from Naranja Drive to Grove Place	87%	55%	74%	87%
26	Grove Place north of Lexington Drive	83%	58%	63%	92%
27	School Campus Lot	4%	47%	42%	7%
Overall Occupancy		71%	71%	59%	75%

## 3. Multipurpose Field Traffic Analysis

An analysis of potential traffic impacts are provided for these scenarios:

- Existing With Project
- Opening Year Without project
- Opening Year With project

The following presents the trip generation and trip distribution from the project, and presents the results of the impact analysis to study intersections and roadway segments.

### 3.1 TRIP GENERATION

The proposed Project would not expand the school's enrollment capacity, but is expected to increase traffic and parking demand around the project site due to new public use and city programming on weekday evenings. Currently, the project site is used on the weekends by AYSO from 8:00 a.m. to 6:00 p.m. on Saturdays, and 10:00 a.m. to 6:00 p.m. on Sundays. The proposed Project would not increase capacity of the existing Wilson MS field for AYSO use, rather, the proposed Project would allow for evening uses of the field. As such, the proposed Project would not change the number of vehicle trips during the Saturday mid-day peak period. Therefore, and the proposed Project would not add trips during the Saturday midday peak hours and it is not further evaluated in this analysis. The trip generation rates for soccer fields during the weekday AM and PM peak hours were obtained from the latest version of the Institute of Transportation Engineers' (ITE) Trip Generation Manual, 10<sup>th</sup> Edition. The ITE Trip Generation Manual is the most widely recognized resource for estimating the number of trips generated by a land use or project type. The manual provides peak hour and daily rates on weekdays under land use code 488, Soccer Complex. Table 5 summarizes the trip generation rates from the ITE manual and presents both the average rates and the high end of the statistical sample for each period.

**Table 5** ITE Trip Generation Rates for Soccer Complex

Rate Type	Weekday						
	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Average Rate	71.33	0.60	0.39	0.99	10.84	5.59	16.43
Highest Rate	90.81	1.07	0.81	1.88	16.67	8.20	24.88

Notes: Trip Generation rates per field.

Trip generation rates are based on the ITE Trip Generation Manual (10th edition) for the Soccer Complex Land Use (ITE Code 488).

To calculate the expected project-related trip generation, the rates shown above are multiplied by the anticipated number of fields. The proposed Project includes development of two fields, and estimated project-related trips are shown in Table 6. Using the average rates, the project would generate 2 trips in the AM peak hour and 33

### 3. Multipurpose Field Traffic Analysis

trips in the PM peak hour. Using the highest rates, the project would generate 4 trips in the AM peak hour and 49 trips in the PM peak hour. As shown in Table 7, the project would generate a negligible number of trips in the weekday AM peak hour. In addition, public use of the fields would not be allowed on weekdays in the AM peak hour. Therefore, the AM peak hour traffic will not be further evaluated in this analysis.

**Table 6 ITE Trip Generation Estimates for Soccer Complex**

Rate Type	Weekday						
	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Average Rate	143	1	1	2	22	11	33
Highest Rate	182	2	2	4	33	16	49

Trip generation rates for peak hour of adjacent streets, based on Soccer Complex Land Use (ITE Code 488) per the ITE Trip Generation Manual, 10th edition.

The sample size to support these rates is relatively small—less than 10 samples. Therefore, PlaceWorks also reviewed the proposed use of the fields to calculate vehicular trips based on estimates for players, spectators, and supporting personnel (coaches, referees, etc.). PlaceWorks consulted with the City of Glendale Parks and Recreation Department to obtain anticipated usage estimates. To verify the trip generation based on ITE trip rates, trip generation was also calculated based on usage estimates assuming a number of players, coaches, and referees at the soccer fields for adult soccer and youth soccer. The estimates were provided for both adult and youth because of different ridership characteristics and because they have different team sizes. Table 7 shows the trip generation rates per player/coach/referee, and Table 8 shows the estimated project trip generation for the proposed 2 fields based on usage estimates. It should be noted that under the usage estimate methodology, a 20 percent trip reduction was applied to account for carpool and walk/bike/transit modes. The project trip generation based on usage estimates is highest for youth games. As shown on Table 8, the highest trip generation would occur at 2 youth games occurring concurrently. This would result in 40 peak hour trips in the weekday PM peak hour.

**Table 7 Trip Generation Rates Based on Usage Estimates**

Land Use	Variable Type	Trip Generation-PM Peak Hour		
		In	Out	Total
Youth Game	Youth Players	1	0.5	1.5
	Coach/Referee	1	0	1
Adult Game	Players	1	0	1
	Coach/Referee	1	0	1

<sup>1</sup> Assumes 50% of parents drop off children and leave the soccer fields.

<sup>2</sup> Assumes all adults driving own cars and parking.

### 3. Multipurpose Field Traffic Analysis

**Table 8 Project Trip Generation Based on Usage Estimates**

Land Use	Variable Type	Players/Referee/Coaches	Fields	Trip Generation-PM Peak Hour		
				In	Out	Total
Youth Game	Youth Players	16	2	26	13	39
	Referee	1	1	1	0	1
	<b>Total</b>	<b>17</b>	<b>3</b>	<b>27</b>	<b>13</b>	<b>40</b>
Adult Game	Players	22	2	35	0	35
	Referees	3	1	2	0	2
	<b>Total</b>	<b>25</b>	<b>3</b>	<b>37</b>	<b>0</b>	<b>37</b>

<sup>1</sup> For Youth Games it is assumed that each team has 8 players. Each coach is also a parent that has a child in the team.

<sup>2</sup> For Adult Games it is assumed that each team has 11 players.

<sup>3</sup> Referees are needed only in one field, as one of the fields is for practices only.

In conclusion, the ITE Trip Rates using the high range provide a reasonable and technically defensible estimate to calculate trip generation for the project. Therefore, **for the purpose of this analysis, the project would generate 4 trips in the AM peak hour and 49 trips in the PM peak hour.**

## 3.2 TRIP DISTRIBUTION AND ASSIGNMENT

Traffic distribution determines the directional orientation of project traffic. Trip distribution maps are presented in Figures 7 and 8 for inbound and outbound traffic, respectively. Trip distribution patterns are influenced by the location of the project, type and intensity of proposed land uses, the circulation network, and location of employment and commercial centers. Traffic assignment is the determination of specific trip routes given the previously developed traffic distribution pattern. The project's trip distribution is based on a review of the study area arterial roadways and freeways, a review of land uses in the area, the traffic patterns, locations of residences, and traffic counts taken in the project area.

The trip distribution percentages are applied to the project trip generation to determine the traffic volumes forecast to be added at each intersection (i.e., trip assignment).

## 3.3 EXISTING WITH PROJECT TRAFFIC CONDITIONS

### 3.3.1 Intersection Level of Service

To assess Existing Year With Project traffic conditions, project traffic is added to the existing traffic levels. LOS for these conditions is summarized in Tables 9.

### 3. Multipurpose Field Traffic Analysis

**Table 9 Existing With Project Intersection LOS, Weekday PM Peak Hour**

Intersection	Traffic Control	Without Project		With Project		Change	Significant?
		ICU / Delay	LOS	ICU / Delay	LOS		
1. WB Ventura Freeway Ramps at Monterey Road	Signal	0.849	D	0.850	D	0.001	No
2. Glendale Avenue at EB Ventura Freeway Ramps	Signal	0.675	B	0.678	B	0.003	No
3. Glendale Avenue at Monterey Road	Signal	0.876	D	0.882	D	0.006	No
4. Glendale Avenue at Glenoaks Boulevard	Signal	0.757	C	0.758	C	0.001	No
5. Adams Street at Monterey Road	CCS	14.28	B	14.69	B	0.410	No
6. Adams Street at Glenoaks Boulevard	CCS	12.79	B	12.79	B	0.000	No
7. Verdugo Road at Monterey Road	Signal	0.614	B	0.625	B	0.011	No
8. Verdugo Road at Glenoaks Boulevard	Signal	0.511	A	0.513	A	0.002	No

Notes: CCS = Cross-Street Stop

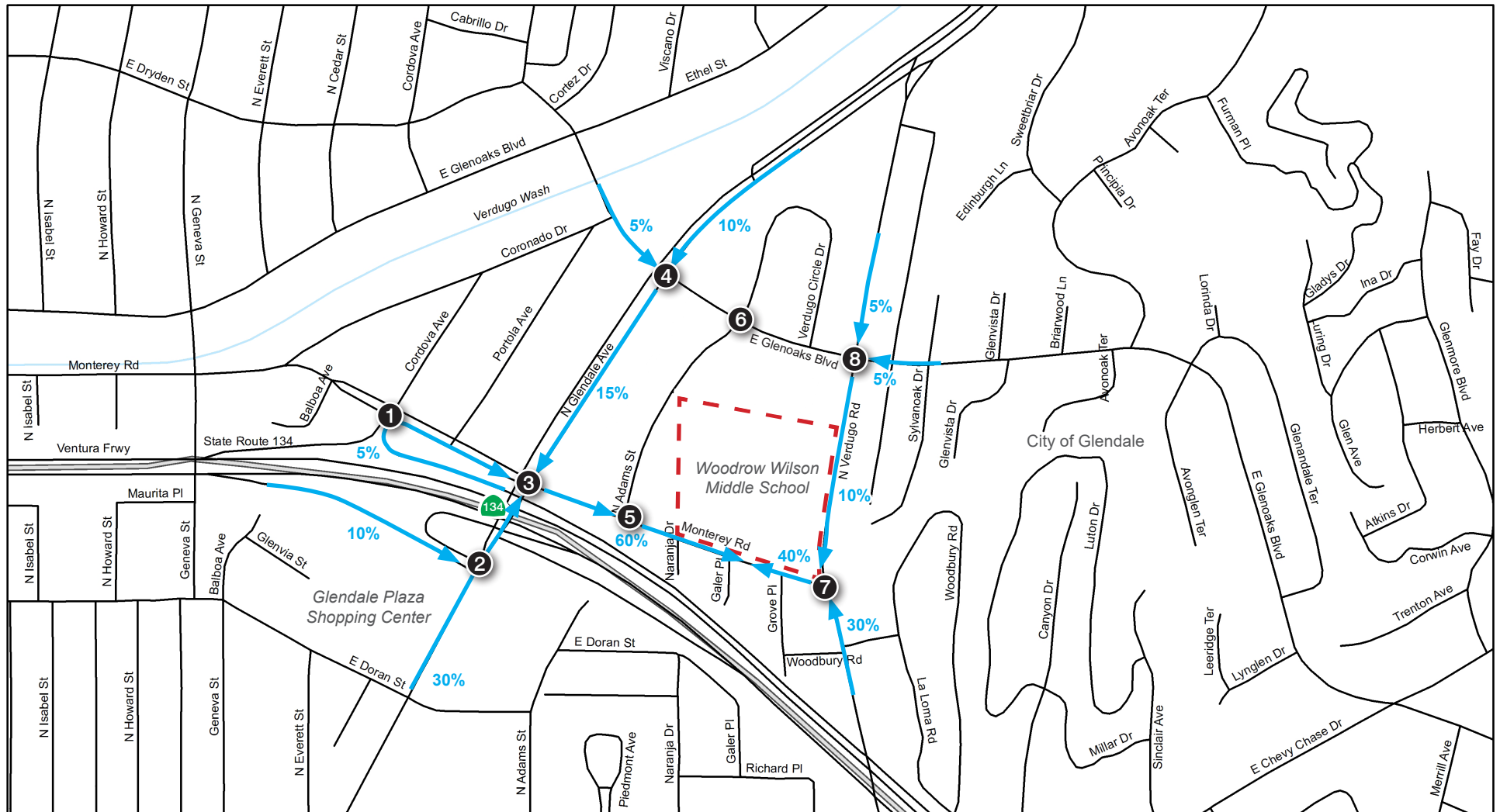
**Bold** show intersections operating at unacceptable LOS.

Intersection volumes, Delay and LOS worksheets are included in Appendix E.

As shown in Tables 9, all study intersections operate at acceptable LOS during the Weekday PM Peak hour for the Existing With Project traffic conditions.



Figure 7 - Project Trip Distribution (Inbound)



--- Project Boundary

→ Route to Project

XX% % from Project

# Study Intersections (8)

0 800  
Scale (Feet)



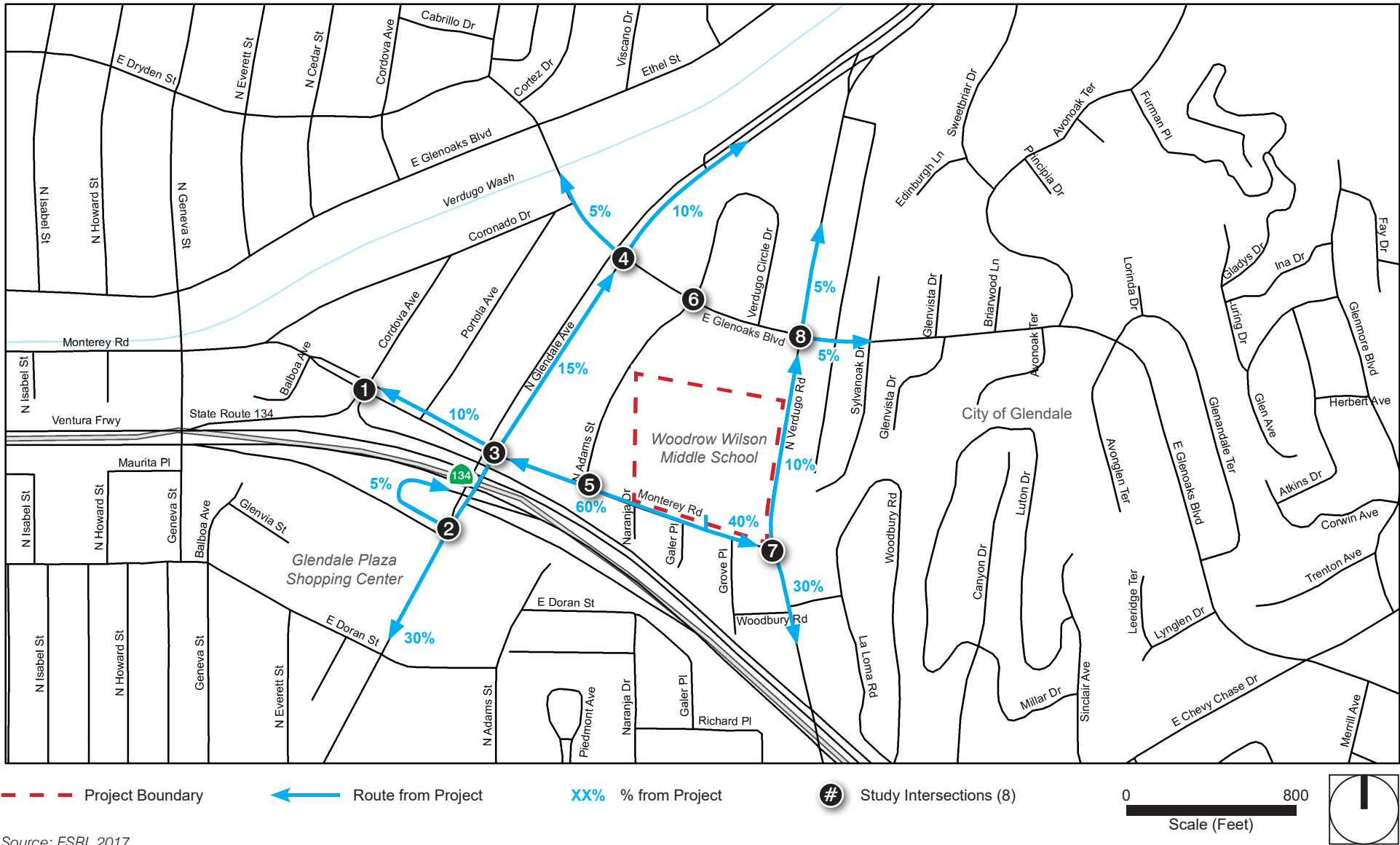
Source: ESRI, 2017

PlaceWorks

### 3. Multipurpose Field Traffic Analysis

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Figure 8 - Project Trip Distribution (Outbound)



### 3. Multipurpose Field Traffic Analysis

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### 3. Multipurpose Field Traffic Analysis

#### 3.3.2 Neighborhood Street Segment Analysis

To assess Existing Year With Project traffic conditions, project traffic is added to the existing traffic levels along two project study area roadways. LOS for these conditions are summarized in Table 10. As shown in Table 10, all study segments operate with volumes well below their daily capacity, with a corresponding LOS A and B, which is acceptable.

**Table 10 Existing With Project Street Segment Volumes**

Street Segment	Functional Classification	Street Layout	Environmental Capacity (vehicles/day) <sup>1</sup>	Day	Without Project			With Project			Significant?
					ADT	V/C	LOS	ADT	V/C	LOS	
Monterey Road (Glendale Av to Verdugo Rd)	Urban Collector	2U	10,000	Weekday	6,020	0.602	B	6,410	0.641	B	No
Adams Street (Glenoaks Blvd to Monterey Rd)	Local	2D	2,500	Weekday	560	0.224	A	570	0.228	A	No

<sup>1</sup> 2U= 2-lane undivided road, 2D= 2-lane divided road.

<sup>2</sup> Functional Classifications and Environmental Capacity daily volumes obtained from the City of Glendale General Plan Circulation Element.

### 3.4 FUTURE TRAFFIC CONDITIONS

The Los Angeles County Guidelines for CMP Transportation Impact Analysis includes ambient growth rates for the City of Glendale in 5-year increments. To estimate future traffic conditions, opening year scenarios are based on the year 2021 traffic growth factor of 1.027 percent over a 5-year period. To conservatively estimate future year buildout conditions, this analysis used a total ambient growth of 2 percent over the 2-year period from 2019 to 2021.

Cumulative traffic is the traffic generated by the development of future projects that have been approved but not yet built and/or for which development applications have been filed and are under consideration by the City. Sixty-five projects were provided for consideration to be included in the traffic forecasts by the City of Glendale Planning Department. The list of cumulative projects screened to have a potential to affect traffic volumes in the vicinity of the school are included in Appendix F. For these cumulative projects, trip generation values were extracted from the ITE Trip Generation Manual. Based on a review of the circulation system, the trip generation, location, and land use type, the cumulative projects shown on Figure 9, *Cumulative Developments Location Map*, would have the potential for directly adding measurable traffic to the study area street system. The cumulative development projects assumed in this traffic analysis are estimated to generate 41,183 average daily trips (ADT) on weekdays, 1,670 trips during the weekday AM peak hour, and 1,586 trips during the weekday PM peak hour.

This traffic impact analysis assumes that all of the cumulative projects are developed and operational at the buildout of the proposed Project. This is the most conservative, worst-case approach, since it is possible that not all of these projects will be operational when the proposed Project begins operations. In addition, impacts for these cumulative projects would likely be subject to mitigation measures, which could reduce potential impacts. Under this analysis, however, those future mitigation measures are not considered.

### 3. Multipurpose Field Traffic Analysis

#### 3.4.1 Opening Year Without Project Traffic Conditions

##### Intersection Level of Service

To assess Opening Year No Project traffic conditions, existing traffic is combined with ambient growth and cumulative traffic. The intersection operations for the No Project traffic conditions are shown in Tables 11. Intersection volumes, Delay, and LOS worksheets are included in Appendix G. All intersections are forecast to operate at acceptable LOS under Opening Year Without Project conditions on Weekday PM.

**Table 11 Opening Year Without Project Intersection LOS, Weekday PM Peak Hour**

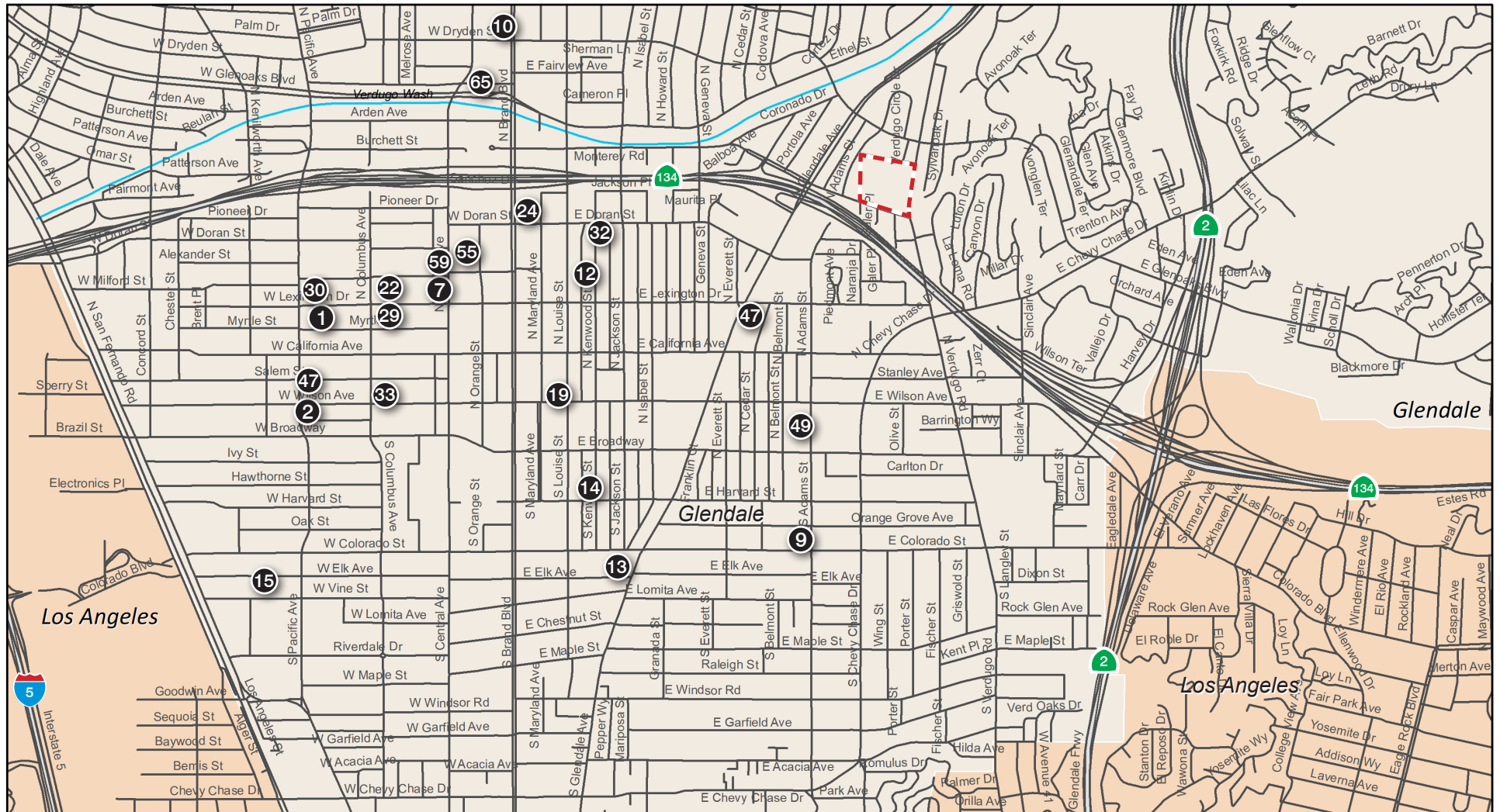
Intersection	Intersection Control	Acceptable LOS	Weekday PM Peak Hour	
			ICU (V/C) or Average Delay (sec/veh)	LOS
1. WB Ventura Freeway Ramps at Monterey Road	Signal	E	0.884	D
2. Glendale Avenue at EB Ventura Freeway Ramps	Signal	E	0.689	B
3. Glendale Avenue at Monterey Road	Signal	E	0.902	E
4. Glendale Avenue at Glenoaks Boulevard	Signal	E	0.775	C
5. Adams Street at Monterey Road	CCS	D	14.71	B
6. Adams Street at Glenoaks Boulevard	CCS	D	12.93	B
7. Verdugo Road at Monterey Road	Signal	E	0.615	B
8. Verdugo Road at Glenoaks Boulevard	Signal	E	0.516	A

Notes: CCS = Cross-Street Stop.

**Bold** show intersections operating at unacceptable LOS.

Intersection volumes, Delay and LOS worksheets are included in Appendix G.

Figure 9 - Cumulative Projects Map



--- Project Boundary      # Cumulative Project Location (20)

0 2,000  
Scale (Feet)



Source: ESRI, 2017

### 3. Multipurpose Field Traffic Analysis

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### 3. Multipurpose Field Traffic Analysis

#### Neighborhood Street Segment Analysis

To assess Opening Year Without Project traffic conditions, cumulative project traffic and ambient growth is added onto the existing traffic levels along two project study area roadways. LOS for these conditions are summarized in Table 12. As shown in Table 12, all study segments operate with volumes well below their daily capacity, with a corresponding LOS A and B, which is acceptable.

**Table 12 Opening Year Without Project Street Segment Analysis**

Street Segment	Functional Classification	Street Layout	Environmental Capacity (vehicles/day) <sup>1</sup>	ADT	V/C	LOS
Monterey Road (Glendale Av to Verdugo Rd)	Urban Collector	2U	10,000	6,200	0.620	B
Adams Street (Glenoaks Blvd to Monterey Rd)	Local	2D	2,500	570	0.228	A

<sup>1</sup> 2U= 2-lane undivided road, 2D= 2-lane divided road.

<sup>2</sup> Functional Classifications and Environmental Capacity daily volumes obtained from the City of Glendale General Plan Circulation Element.

#### 3.4.2 Opening Year With Project Traffic Conditions

To assess Opening Year With Project traffic conditions, existing traffic is combined with ambient growth, cumulative, and project traffic.

#### Intersection Level of Service

The intersection operations for the With Project traffic conditions are shown in Tables 13. Under With Project conditions, all intersections would operate at acceptable LOS.

**Table 13 Opening Year With Project Intersection LOS, Weekday PM Peak Hour**

Intersection	Traffic Control	Without Project		With Project		Change	Significant?
		ICU / Delay	LOS	ICU / Delay	LOS		
1. WB Ventura Freeway Ramps at Monterey Road	Signal	0.884	D	0.886	D	0.002	No
2. Glendale Avenue at EB Ventura Freeway Ramps	Signal	0.689	B	0.692	B	0.003	No
3. Glendale Avenue at Monterey Road	Signal	0.902	E	0.909	E	0.007	No
4. Glendale Avenue at Glenoaks Boulevard	Signal	0.775	C	0.776	C	0.001	No
5. Adams Street at Monterey Road	CCS	14.71	B	15.13	C	0.42	No
6. Adams Street at Glenoaks Boulevard	CCS	12.93	B	12.93	B	0	No
7. Verdugo Road at Monterey Road	Signal	0.615	B	0.625	B	0.01	No
8. Verdugo Road at Glenoaks Boulevard	Signal	0.516	A	0.518	A	0.002	No

Notes: CCS = Cross-Street Stop

**Bold** show intersections operating at unacceptable LOS.

Intersection volumes, Delay and LOS worksheets are included in Appendix E.

### 3. Multipurpose Field Traffic Analysis

In summary, under the proposed Project, traffic related to stadium events would not cause any intersections to deteriorate to an unacceptable LOS during the Weekday PM peak hour.

#### Neighborhood Street Segment Analysis

To assess Opening Year With Project traffic conditions, cumulative project traffic, ambient growth, and project trip generation is added to the existing traffic levels along two project study area roadways. LOS for these conditions are summarized in Table 14. As shown, with the addition of project traffic there would be a minimal increase in the V/C ratio for each study segment. All study segments would operate with volumes well below their daily capacity with a corresponding LOS A and B, which is acceptable.

**Table 14 Opening Year With Project Street Segment Volumes**

Street Segment	Functional Classification	Street Layout	Environmental Capacity (vehicles/day) <sup>1</sup>	Day	Without Project			With Project			Significant?
					ADT	V/C	LOS	ADT	V/C	LOS	
Monterey Road (Glendale Av to Verdugo Rd)	Urban Collector	2U	10,000	Weekday	6,200	0.620	B	6,410	0.641	B	No
Adams Street (Glenoaks Blvd to Monterey Rd)	Local	2D	2,500	Weekday	570	0.228	A	570	0.228	A	No

<sup>1</sup> 2U= 2-lane undivided road, 2D= 2-lane divided road.

<sup>2</sup> Functional Classifications and Environmental Capacity daily volumes obtained from the City of Glendale General Plan Circulation Element.

## 4. Nonmotorized Travel

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All roads in the vicinity of the school have paved sidewalks on both sides of the street. In addition, crosswalks are painted on all major intersections in the study area such as intersections along Glendale Avenue and Verdugo Road. Signalized intersections include actuated pedestrian signal heads. There are no market bicycle lanes in the study area. However, the existing sidewalk and crosswalks would provide adequate pedestrian travel in the area for accessing the site on foot or parking on public streets and walking to the school.

## 4. Nonmotorized Travel

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## 5. Parking Analysis

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### 5.1 PARKING GENERATION

Parking demand for the proposed Project is based on ITE's Parking Generation Manual 4<sup>th</sup> Edition for a "soccer complex" (ITE land use code 488. According to ITE's Parking Manual, the peak parking rate per soccer complex field during the weekday is 38.3.

To calculate the expected project-related parking demand, the rates shown above are multiplied by the anticipated number of fields, which is two. The peak parking demand for the proposed two fields would be 77 during the weekday. As discussed previously, the project site is currently used on the weekends by AYSO from 8:00 a.m. to 6:00 p.m. on Saturdays, and 10:00 a.m. to 6:00 p.m. on Sundays. The proposed Project would not increase capacity of the existing Wilson MS field for AYSO use, rather, the proposed Project would allow for evening uses of the field. As such, the proposed Project would not change parking demand during the Saturday mid-day peak period and it is not further evaluated in this analysis.

### 5.2 PROJECT-RELATED PARKING IMPACTS

The proposed Project will increase parking demand around the project vicinity during use of the multipurpose field for non-school use on weekdays after 5PM. There would be no increase in parking demand with the project during the daytime on weekdays and weekends, as the fields and courts are already in use during those times. There are parking spots available at the school parking lot off Monterey Road and off-site along the public streets. The highest increase in parking demand with the project would occur on weekday evenings. Table 15 shows the anticipated parking demand during the weekday PM peak hour. Parking counts were conducted along the roadways mentioned in Section 2.2.4.

**Table 15     Parking Demand in Terms of Available Parking**

	<b>Weekday PM Peak Hour</b>
Parking Demand Estimate	77
Available On-site Parking	66
Available Off-site Parking	308
<b>Total Available Parking</b>	<b>374</b>
<b>Available minus Demand</b>	<b>297</b>

Table 15 presents a worst-case scenario for a weekday, where the peak parking demand for the project would coincide with the least amount of parking supply that was observed at any time during the field surveys at the school lot and along public streets. As shown in Table 15, on weekdays there is expected to be approximately 66 available spaces at the school lot and an additional 308 curbside spaces on public streets. The available supply of 374 spaces in the study area will be able to absorb the anticipated parking demand of 77 spaces.

## 5. Parking Analysis

Therefore, the parking demand from the project can be absorbed by the available parking supply at the school lot and on public streets and will not cause an impact to the area from a parking standpoint.

## 6. Conclusion

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### 6.1 TRAFFIC IMPACTS

The City's General Plan Circulation Element has LOS policies to maintain acceptable operations during weekday peak hours. On all analyzed study area intersection and study area roadway segments, the proposed Project traffic would not degrade the operation of the circulation system on weekdays during the weekday PM. The City's LOS policies try to maintain the continuous performance of the circulation system and to work toward the mobility goals in the general plan. The level of congestion that is anticipated to occur prior to a full-capacity event at the proposed field would not affect the typical weekday commuter peak hours. Opening Year With Project traffic conditions will operate well within the designed capacity for all analyzed study area intersection and study area roadway segments. The proposed Project will not degrade existing traffic conditions, and is therefore impacts are considered less than significant.

### 6.2 PARKING IMPACTS

The proposed Project will increase parking demand around the project vicinity during use of the multipurpose field for non-school use on weekdays after 5 PM. No increase in parking demand would occur during the day on weekdays and weekends with the project. There are parking spots available at the school parking lot off Monterey Road and off-site along the public streets. On weekdays, the available supply of 374 spaces in the study area will be able to absorb the anticipated parking demand of 77 spaces. The parking demand from the project can be absorbed by the available parking supply at the school lot and on public streets, and impacts would be less than significant.

## 6. Conclusion

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## 7. References

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California Department of Transportation. 2014. *California Manual of Uniform Traffic Control Devices*.

City of Glendale. General Plan Circulation Element.

Los Angeles County Metropolitan Transportation Authority. 2010 Congestion Management Program for Los Angeles County.

Institute of Transportation Engineers. 2010. *Parking Generation*. 4th edition.

Institute of Transportation Engineers. 2017. *Trip Generation*. 10th edition.

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

## 7. References

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## Appendices

# Appendix A. Memorandum of Understanding

## Appendices

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## Fernando Sotelo

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**From:** Casanova, Pastor <PCasanova@Glendaleca.gov>  
**Sent:** Monday, November 18, 2019 12:05 PM  
**To:** Vierheilig, Peter; Fernando Sotelo  
**Cc:** Julian Capata; Alexander Kessel  
**Subject:** RE: Wilson Traffic Study

Peter / Fernando,

As indicated by Fernando, there is no change in the methodology. They will be updating traffic counts, using latest HCM, and incorporating current lane geometries, in particular at Glendale/Monterey intersection.

The study should also update the cumulative/related projects.

Fernando's approach is ok.

Thank You,

Pastor E. Casanova, T.E., Principal Traffic Engineer • City of Glendale • Public Works Department, Engineering Division/Traffic

633 E. Broadway, Room 205 • Glendale, CA 91206 • (818) 548-3945 • [PCasanova@glendaleca.gov](mailto:PCasanova@glendaleca.gov)

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**From:** Vierheilig, Peter  
**Sent:** Wednesday, November 13, 2019 8:43 AM  
**To:** 'Fernando Sotelo'; Casanova, Pastor  
**Cc:** Julian Capata; Alexander Kessel  
**Subject:** RE: Wilson Traffic Study

Fernando,

I have emailed planning to see if your list of cumulative projects is current.

Pastor, please let us know if the traffic and parking methodology (below) is ok.

Thanks!

Peter Vierheilig, PLA, Project Manager • (818) 548-2057 •

---

**From:** Fernando Sotelo [mailto:fsotelo@placeworks.com]  
**Sent:** Tuesday, November 12, 2019 4:34 PM  
**To:** Vierheilig, Peter; Casanova, Pastor  
**Cc:** Julian Capata; Alexander Kessel  
**Subject:** RE: Wilson Traffic Study

**CAUTION:** This email was delivered from the Internet. Do not click links, open attachments, or reply if you are unsure as to the sender.

Hi Peter and Pastor,

We received updated traffic and parking counts to update our traffic and parking study completed in 2018. I just want to go over a few key assumptions and requests to revise the study properly.

### Project Description

Has the project description and anticipated use changed since the NOP in 2017?

### Cumulative Projects

Could you request planning to review and provide us a list of cumulative projects to include in the study? Below is the table of cumulative projects we included in the 2018 study that would affect the study area:

#### **Cumulative Projects Trip Generation**

ID	Address	Land Use	ITE Code	Unit Amount	Unit	Weekday Daily	PM	
							In	
1	534 N Kenwood Street	Apartment	220	11	DU	73	4	
2	429 N Kenwood Street	Apartment	220	21	DU	140	8	
3	528 N Maryland Avenue	Apartment	220	5	DU	33	2	
4	1128 Stanley Avenue	Apartment	220	4	DU	27	2	
5	818 E Colorado Street	Specialty Retail Center	826	10	TSF	443	12	

<sup>1</sup> Trip Generation Rates from ITE Trip Generation Manual 10<sup>th</sup> Edition

### Traffic and Parking Study area and Methodology

We won't be changing the methodology, except for using the latest Highway Capacity Methodology for unsignalized intersections (HCM 6<sup>th</sup> Edition) where applicable. Everything else will be consistent with the 2018 traffic study. We will review the study area again to identify changes to the network and parking conditions, in particular to the intersection of Monterey at Glendale. Basically we are updating the study with 20189 counts, with updated cumulative projects and the latest network lane geometries and parking configurations.

P  
Let me know if you agree or if we should send a formal MOU similar to what we did in 2017.

Thanks

**FERNANDO SOTELO, PE, PTP**  
Senior Associate

## Fernando Sotelo

---

**From:** Casanova, Pastor <PCasanova@Glendaleca.gov>  
**Sent:** Friday, May 19, 2017 5:04 PM  
**To:** Fernando Sotelo; Vierheilig, Peter  
**Cc:** Julian Capata; Ambayec, Dennis; Vartanian, Sevak; Dombroski, Tad; Brown, Jeff  
**Subject:** RE: Wilson MS Multi-purpose Field: EIR - traffic counts Who does consultant talk to to determine study intersections and other study requirements?

Good afternoon Fernando,

We reviewed the Wilson MS Multi-purpose Field MOE and offer the following comments related to the Traffic Study:

- Add the following intersections to your proposed intersection study list:
  - Adams St and Glenoaks Blvd
  - Adams St and Monterey Rd
  - Monterey Rd and Ventura Fwy WB Ramps
- Add a neighborhood street segment analysis component to the traffic study (to evaluate Environmental capacity) that includes the following street segments:
  - Monterey Rd between Glendale Ave and Verdugo Rd
  - Adams St between Glenoaks Blvd and Monterey Rd
- Provide trip distributions assumptions for trips “to” the project.
- Revise trip distribution exhibits to include additional study intersections

The following are comments related to the Parking analysis:

- Revise parking analysis assumptions per comments shown in red (and underlined) below:

A parking analysis will be prepared to estimate the project-related parking impacts in the vicinity of the school. Parking counts will be taken on a weekday evening from 5 to 10 PM in 30 minute intervals and between ~~10 AM to 12PM~~ 8am to 10pm on a Saturday. The parking counts will be taken at the school parking lots and along both sides of the following roadway segments, as shown in Figure 2:

- Verdugo Road from Monterey Road to north of Glenoaks Boulevard
- Glenoaks Boulevard from Adams Street to east of Verdugo Road
- Adams Street between Monterey Road and Glenoaks Boulevard
- Monterey Road from Verdugo Road to west of Adams Street
- Grove Place between Monterey Road and Woodbury Road
- Woodbury Road between Grove Place and La Loma Road

Exhibit B proposes the installation of Solar Array just east of the alley between N. Adams Street and North Verdugo Road. This area may be an additional parking alternative that would significantly increase parking options for this project.

You may proceed with scheduling the traffic counts based on our comments. However, please revise and resubmit the project MOE for confirmation. You may contact me directly if you have any questions.

Thank You,



---

**From:** Fernando Sotelo [mailto:[fsotelo@placeworks.com](mailto:fsotelo@placeworks.com)]

**Sent:** Friday, May 12, 2017 11:51 AM

**To:** Vierheilig, Peter; Casanova, Pastor

**Cc:** Julian Capata

**Subject:** RE: Wilson MS Multi-purpose Field: EIR - traffic counts Who does consultant talk to to determine study intersections and other study requirements?

Hello Pastor,

We prepared this memorandum of understanding to outline key assumptions and methodologies to be used for the traffic and parking study for the Wilson Field. Please review the MOU as soon as possible so we can setup traffic and parking counts, we would like to have counts taken before the memorial day weekend.

In summary, we propose traffic counts during the weekday PM peak hour and midday on Saturday at the following intersections:

1. Glendale Avenue at Glenoaks Boulevard
2. Glendale Avenue at Monterey Road
3. Glendale Avenue at EB Ventura Freeway
4. Verdugo Road at Glenoaks Boulevard
5. Verdugo Road at Monterey Road

And parking counts would be taken on a weekday evening from 5 to 10 PM in 30 minute intervals and between 10 AM to 12PM on a Saturday. The parking counts will be taken at the school parking lots and along the following roadway segments, as shown in Figure 2 of the MOU:

- Verdugo Road from Monterey Road to north of Glenoaks Boulevard
- Glenoaks Boulevard from Adams Street to east of Verdugo Road
- Adams Street between Monterey Road and Glenoaks Boulevard
- Monterey Road from Verdugo Road to west of Adams Street
- Grove Place between Monterey Road and Woodbury Road
- Woodbury Road between Grove Place and La Loma Road

Please review the attached MOU and let me know if you agree with our approach and the count locations and periods. Don't hesitate to contact me if you have questions or would like to discuss. Thanks

**FERNANDO SOTELO, PE, PTP**



**Senior Associate**

3 MacArthur Place, Suite 1100 | Santa Ana, California 92707  
714.966.9220 | fsotelo@placeworks.com | placeworks.com

---

**From:** Julian Capata



**Sent:** Wednesday, May 03, 2017 2:47 PM

**To:** Vierheilig, Peter; Casanova, Pastor; Fernando Sotelo

**Subject:** RE: Wilson MS Multi-purpose Field: EIR - traffic counts Who does consultant talk to determine study intersections and other study requirements?

Pastor,

Thank you for your time regarding this project. I have copied Fernando Sotelo, PlaceWorks' traffic engineer so that he can reach out to you and ensure that our traffic study meets the City's standards and project needs.

Thank you,

Julian

**JULIAN F. CAPATA**  
Senior Associate

700 S. Flower Street, Suite 600, Los Angeles, CA 90017  
213.623.1443 | [jcapata@placeworks.com](mailto:jcapata@placeworks.com) | [placeworks.com](http://placeworks.com)

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**From:** Vierheilig, Peter [<mailto:PVierheilig@Glendaleca.gov>]

**Sent:** Wednesday, May 3, 2017 2:31 PM

**To:** Casanova, Pastor <[PCasanova@Glendaleca.gov](mailto:PCasanova@Glendaleca.gov)>



**Cc:** Julian Capata <[jcapata@placeworks.com](mailto:jcapata@placeworks.com)>

**Subject:** RE: Wilson MS Multi-purpose Field: EIR - traffic counts Who does consultant talk to determine study intersections and other study requirements?

Hello Pastor,

Julian Capata, from our consultant PlaceWorks, wants to contact you to discuss the traffic study they will be performing around the Wilson Middle School site for our Multi-Purpose Sports Field project. I am copying him on this email, so he can reach you.

**JULIAN F. CAPATA**  
Senior Associate

700 S. Flower Street, Suite 600, Los Angeles, CA 90017  
213.623.1443 | [jcapata@placeworks.com](mailto:jcapata@placeworks.com) | [placeworks.com](http://placeworks.com)



Julian, Pastor's phone number is (818) 937-8324.

Thank you!

Peter Vierheilig, PLA, Project Manager • (818) 937-8263 •

---

**From:** Ambayec, Dennis

**Sent:** Wednesday, May 03, 2017 2:25 PM

**To:** Vierheilig, Peter

**Cc:** Casanova, Pastor

**Subject:** RE: Wilson MS Multi-purpose Field: EIR - traffic counts Who does consultant talk to to determine study intersections and other study requirements?

Peter,

Please work with Pastor. Thanks.

Dennis H. Ambayec, P.E., Deputy Director of Public Works/City Engineer • City of Glendale • Public Works Engineering  
633 E. Broadway Rm 204 • Glendale, CA 91206 • (818) 548-3945 • [Dambayec@glendaleca.gov](mailto:Dambayec@glendaleca.gov)



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**From:** Vierheilig, Peter

**Sent:** Wednesday, May 03, 2017 1:28 PM

**To:** Ambayec, Dennis

**Subject:** RE: Wilson MS Multi-purpose Field: EIR - traffic counts Who does consultant talk to to determine study intersections and other study requirements?

Hello Dennis,

In Wayne Ko's absence, can Pastor confer with my EIR consultant's traffic sub-consultant with regards to the traffic study required for the Wilson Middle School Multi-Purpose Field EIR – or has someone else been assigned Wayne's duties?

Thanks,

Peter Vierheilig, PLA, Project Manager • (818) 937-8263 •



May 11, 2017

City of Glendale Public Works Department  
Pastor Casanova  
613 East Broadway, Room 120  
Glendale, CA 91206  
pcasanova@glendaleca.gov

Subject: Memorandum of Understanding (MOU) for the Traffic Impact Analysis for the Multi-Purpose Field Development at Wilson Middle School

Dear Mr. Casanova:

PlaceWorks is preparing a traffic study and processing CEQA environmental documents for the development of a multi-purpose field with sports field lighting on the campus of Wilson Middle School, at 1221 Monterey Road in Glendale. The City has determined that an EIR will be required to analyze project impacts on the physical environment, including a Traffic and Parking Study. This memorandum of understanding (MOU) describes the project and outlines the proposed methodologies and basic assumptions for the traffic and parking impact analysis for the project. This has been prepared for The City of Glendale for review and comment to ensure that the study uses appropriate assumptions to evaluate potential traffic and parking impacts from the project. The MOU includes a description of the project, trip generation estimates for the project, trip distribution, a list of study area intersections to be evaluated, and identification of an ambient growth rate, scenarios to be evaluated, criteria to evaluate levels of service and to determine thresholds of significance. In addition, the proposed parking survey and parking study area are included in this memo.

### **Project Description**

The project includes the development of a multi-purpose field on the campus of Wilson Middle School. In addition to an artificial turf multi-purpose field with soccer and lacrosse markings, the proposed amenities include rubberized surface jogging track, fitness equipment, seating, restroom and storage/maintenance building(s), walkways, re-grading of the existing basketball court surface, and sports field lighting. The school playing field areas would remain "open" for public use and for city programming. Wilson Middle School would access the field during school hours, and the city would access the field during the hours of 5 p.m. to 10 p.m. Monday through Friday, and 8 a.m. to 10 p.m. Saturday and Sunday.

The project site is within a medium-density residential community. The location of the fields is bordered to the east by Verdugo Road and to the north by residential uses. The facility will make use of existing street and on-site parking. Primary site access would be the main school parking lot on Monterey Road; curbside parking is allowed on the roadways in the vicinity of the school including Verdugo Road, Monterey Road, and Adams Street.

### **Trip Generation and Distribution**

The proposed project would not expand the school's enrollment capacity, but is expected to increase traffic and parking demand around the project site due to new public use and city programming on weekday evenings and weekends.

The trip generation rates for soccer fields were obtained from ITE's Trip Generation Manual. The manual provides peak hour and daily rates on weekdays and weekends under land use code 488, Soccer Complex. Table 1 summarizes the trip generation rates obtained from the ITE Trip Generation Manual, and presents both the average rates and the high end of the statistical sample for each period.

**Table 1 ITE Trip Generation Rates For Soccer Complex**

Rate Type	Weekday							Saturday			
	Daily	AM Peak Hour			PM Peak Hour			Daily	Peak Hour		
		In	Out	Total	In	Out	Total		In	Out	Total
Average Rate	71.33	0.64	0.48	1.12	11.86	5.84	17.70	117.43	14.56	15.78	30.34
Highest Rate	90.81	1.10	0.81	1.88	16.67	8.20	24.88	117.43	16.42	17.78	34.20

1 Trip Generation rates per field.

2 Trip generation rates are based on the ITE Trip Generation Manual 9th Edition for the Soccer Complex Land Use (ITE Code 488).

3 Peak hour of the generator is not defined in the ITE Manual. For the purpose of this analysis it is assumed to overlap with the traffic peak hour on weekends during midday.

To calculate the expected project-related trip generation, the rates shown above are to be multiplied by the anticipated number of fields. The proposed project includes the development of two fields; estimated project-related trips are shown in Table 2. Utilizing the average rates, the project would generate 2 trips in the weekday AM peak hour, 36 trips in the weekday PM peak hour, and 61 trips in on weekend peak hours. As shown on Table 2, based on ITE's Trip Generation Manual rates using the highest rates, the project would generate 4 trips in the weekday AM peak hour, 49 trips in the weekday PM peak hour and 69 trips in on weekend peak hours. The weekend peak hour normally occurs between 11 AM to 2 PM. As shown in Table 2, the project would generate negligible trips in the weekday AM peak hour. In addition, public use of the fields would not be allowed on weekdays in the AM peak hour. Therefore, AM peak hour traffic will not be further evaluated in this analysis.

**Table 2 Project Trip Generation, ITE Rates**

Rate Type	Weekday							Saturday			
	Daily	AM Peak Hour			PM Peak Hour			Daily	Peak Hour of Generator		
		In	Out	Total	In	Out	Total		In	Out	Total
Average Rate	143	1	1	2	24	12	36	235	29	32	61
Highest Rate	182	2	2	4	33	16	49	235	33	36	69

Trip generation rates for peak hour of adjacent streets, based on Soccer Complex Land Use (ITE Code 488) per the ITE Trip Generation Manual 9th Edition.

The sample size to support these rates is relatively small with less than 10 samples. To verify the trip generation based on ITE trip rates, we will also review the proposed use of the fields to calculate vehicular trips based on estimates for players, spectators and supporting personnel (coaches, referees, etc.). PlaceWorks consulted with the City of Glendale Parks and Recreation Department to obtain anticipated usage estimates. The estimates were provided for both adult and youth because of different ridership characteristics and different team sizes. Table 3 shows the trip generation rates per player/coach/referee and Table 4 shows the project trip generation for the proposed 2 fields based on usage estimates. It shall be noted that a 20% trip reduction was applied to account for carpool and walk/bike/transit modes. The project trip generation based on usage estimates is highest for youth games. As shown on Table 4, the highest trip generation would occur at 2 youth games occurring concurrently. This would result in 40 peak hour trips in the weekday PM peak hour and 78 peak hour trips in the weekend.

**Table 3 Trip Generation Rates Based on Usage Estimates**

Land Use	Variable type	PM Peak Hour			Weekend Peak Hour		
		In	Out	Total	In	Out	Total
Youth Game	Youth Players	1	0.5	1.5	1.5	1.5	3
	Coach/Referee	1	0	1	1	1	2
Adult Game	Players	1	0	1	1	1	2
	Coach/Referee	1	0	1	1	1	2

1 Assumes 50% of parents drop-off children and leave the soccer fields.

2 Assumes all adults driving own cars and parking.

**Table 4 Project Trip Generation Based on Usage Estimates**

Land Use	Variable type	Players/ Referee/ Coaches	Fields	Trip Generation					
				PM Peak Hour			Weekend Peak Hour		
				In	Out	Total	In	Out	Total
Youth Game	Youth Players	16	2	26	13	39	38	38	76
	Referee	1	1	1	0	1	1	1	2
	<b>TOTAL</b>	<b>17</b>	<b>3</b>	<b>27</b>	<b>13</b>	<b>40</b>	<b>39</b>	<b>39</b>	<b>78</b>
Adult Game	Players	22	2	35	0	35	35	35	70
	Referees	3	1	2	0	2	2	2	4
	<b>TOTAL</b>	<b>25</b>	<b>3</b>	<b>37</b>	<b>0</b>	<b>37</b>	<b>37</b>	<b>37</b>	<b>74</b>

1 For Youth Games it is assumed that each team has 8 players. Each coach is also a parent that has a child in the team.

2 For Adult Games it is assumed that each team has 11 players.

3 Referees are needed only in one field, as one of the fields is for practices only.

In conclusion, the ITE Trip Rates using the high range provide a reasonable and technically defensible estimate to calculate trip generation for the project. Therefore, for the purpose of this analysis, the project would generate 4 trips in the AM peak hour, 49 trips in the PM peak hour and 69 trips in on weekend peak hours.

### Study Area Intersections, Roadways and Scenarios

Based on the calculated project trip generation and distribution, the following intersections will be analyzed during weekday PM peak hours and Saturday midday (11 AM to 2 PM):

1. Glendale Avenue at Glenoaks Boulevard
2. Glendale Avenue at Monterey Road
3. Glendale Avenue at EB Ventura Freeway
4. Verdugo Road at Glenoaks Boulevard
5. Verdugo Road at Monterey Road

Figure 1 shows the estimated trip distribution around the project study area and the intersection study locations. The trip distribution is based on a review of the study area circulation network, city boundaries, the existing sports fields utilized for the City's Park and Recreation Programs, and a review of residential land uses in the area.

### **Traffic Study Scenarios**

The traffic study will analyze multiple scenarios based on the anticipated project buildout. The following analysis scenarios will be provided:

- Existing Conditions
- Existing Conditions with Project
- Opening Year with Cumulative Developments without Project
- Opening Year with Cumulative Developments with Project

The Los Angeles County Guidelines for CMP Transportation Impact Analysis includes ambient growth rates for the City of Glendale in 5-year increments. To estimate future traffic conditions, opening year scenarios will use the year 2020 traffic growth rate factor of 1.027%. A list of cumulative projects to be fully operational by project opening year, as provided by the city, will also be included to the background traffic conditions. Trip generation and trip distribution for the cumulative developments will be estimated for inclusion in the background traffic conditions at project opening year.

### **LOS Criteria and Threshold of Significance**

The 2010 Congestion Management Plan (CMP) for Los Angeles County requires use of the Intersection Capacity Utilization (ICU) method to calculate levels of service (LOS) for signalized intersections. The Highway Capacity Manual (HCM) 2010 methodology will be used to calculate LOS at unsignalized intersections.

In the City of Glendale, impacts are considered significant if the project-related increase in the volume-to-capacity (V/C) ratio equals or exceeds 0.02 that have LOS D or worse. The impact is considered significant for unsignalized intersections if the project-related increase in the delay equals or exceeds 3 seconds that have LOS D, or worse.

### **Parking**

A parking analysis will be prepared to estimate the project-related parking impacts in the vicinity of the school. Parking counts will be taken on a weekday evening from 5 to 10 PM in 30 minute intervals and between 10 AM to 12PM on a Saturday. The parking counts will be taken at the school parking lots and along the following roadway segments, as shown in Figure 2:

- Verdugo Road from Monterey Road to north of Glenoaks Boulevard
- Glenoaks Boulevard from Adams Street to east of Verdugo Road
- Adams Street between Monterey Road and Glenoaks Boulevard
- Monterey Road from Verdugo Road to west of Adams Street
- Grove Place between Monterey Road and Woodbury Road
- Woodbury Road between Grove Place and La Loma Road

Parking demand will be based on ITE's Parking Generation manual for a "soccer complex" (ITE land use code 488), as shown in Table 5.

**Table 5      Parking Demand Rates for Soccer Complex**

Weekday Peak Hour	Saturday Peak Hour
38.3	58.8
Parking Demand based on the average rates for the Soccer Complex Land Use (ITE Code 488) per the ITE Parking Generation Manual 4th Edition.	

To calculate the expected project-related parking demand, the rates shown above are to be multiplied by the anticipated number of fields. The calculated parking demand is summarized in Table 6.

**Table 6      Parking Demand Estimates for Soccer Complex**

Weekday Peak Hour	Saturday Peak Hour
77	118
Parking Demand based on the average rates Soccer Complex Land Use (ITE Code 488) per the ITE Parking Generation Manual 4th Edition.	

Please review the following assumptions and let us know if we can schedule traffic and parking counts as proposed in this MOU. Or feel free to call if you have any questions or would like to discuss.

Respectfully submitted,

**FERNANDO SOTELO, PE, PTP**  
**Senior Associate**



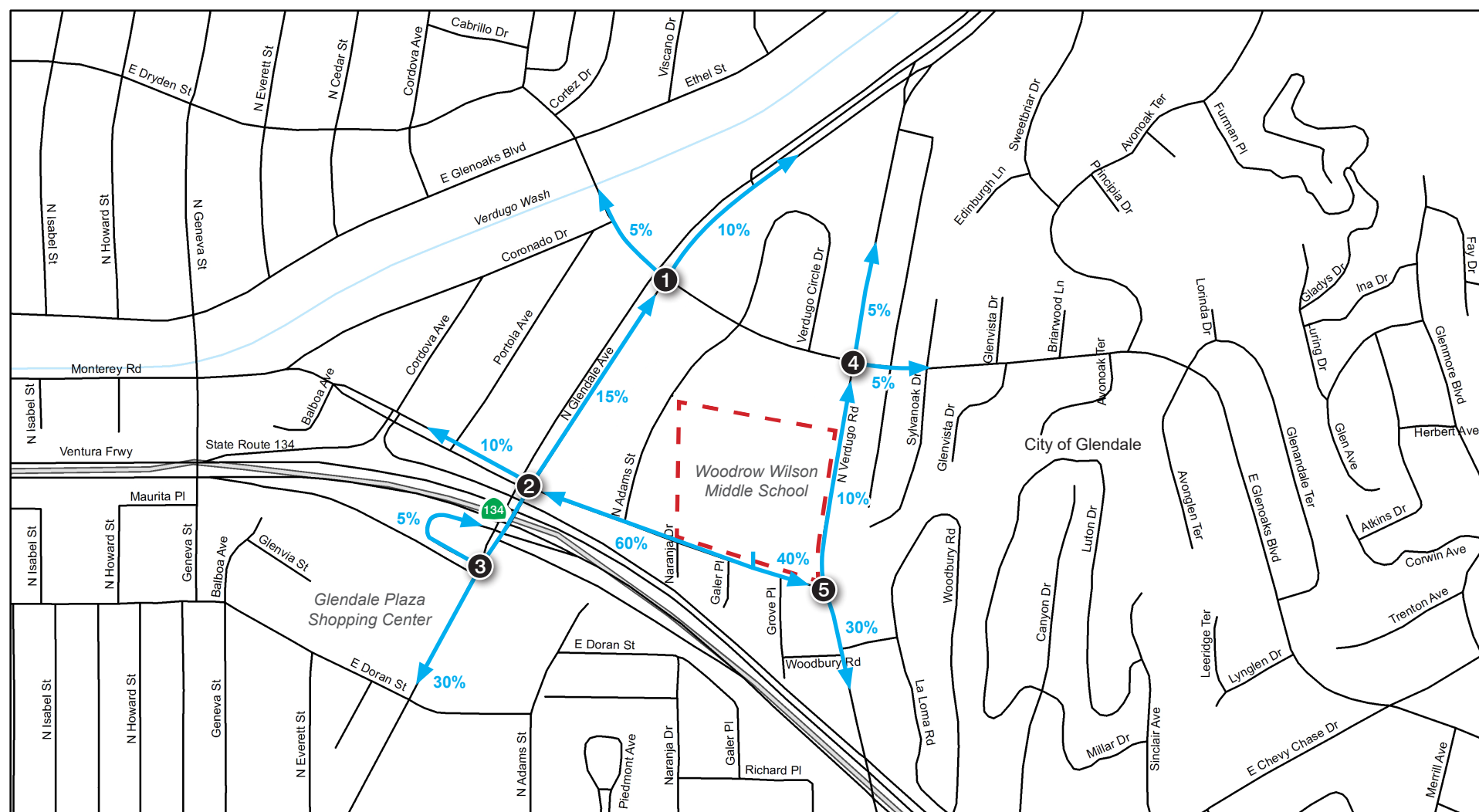
3 MacArthur Place, Suite 1100 | Santa Ana, California 92707  
714.966.9220 | [fsotelo@placeworks.com](mailto:fsotelo@placeworks.com) | [placeworks.com](http://placeworks.com)

## Attachment A.

- Proposed Trip Distribution Map and Intersection Study Locations
- Parking Counts Locations
- Proposed Site Plan



Figure 1 - Project Trip Distribution



--- Project Boundary

← Route from Project

XX% % from Project

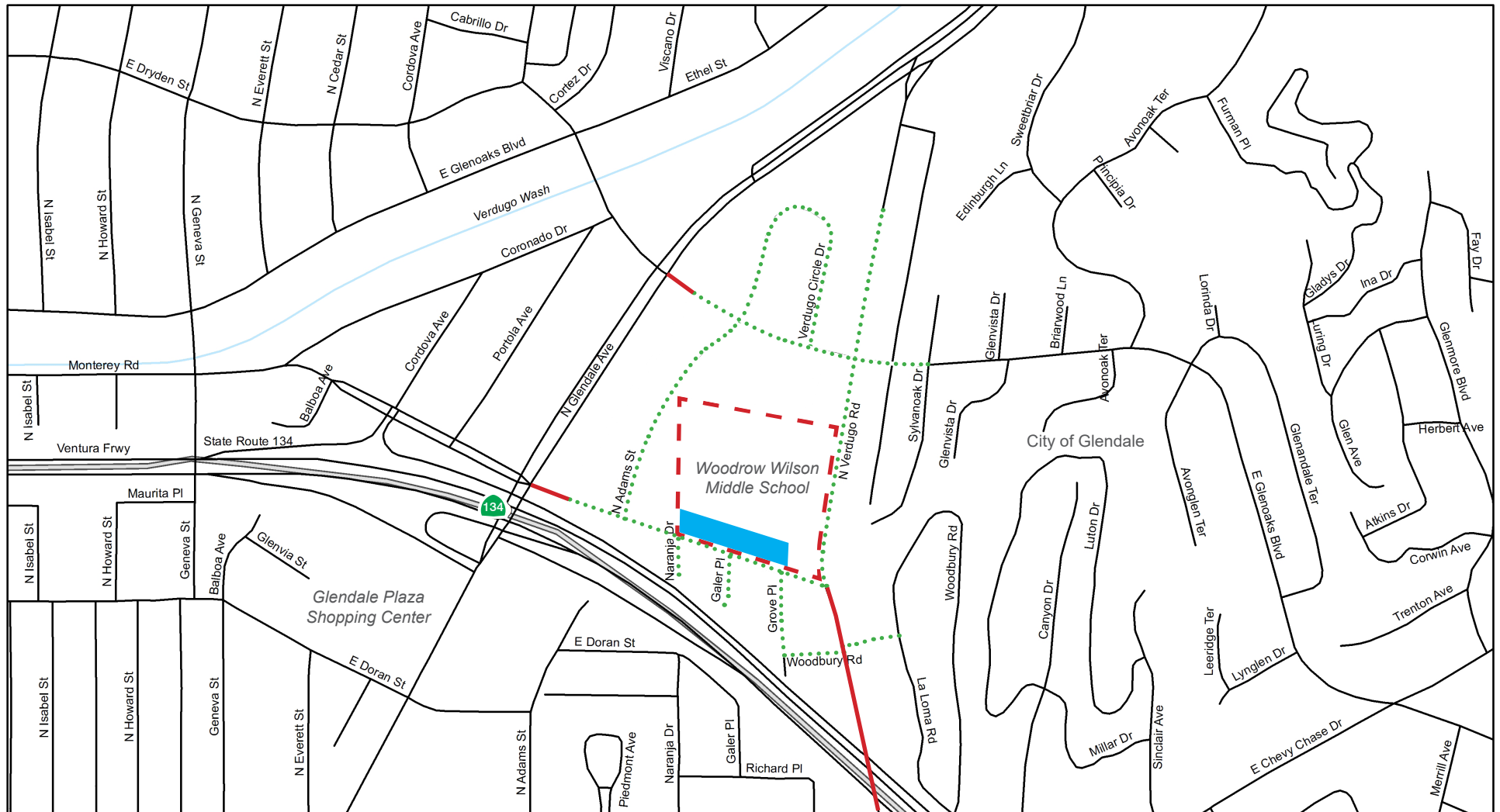
# Study Intersections (5)

0 800  
Scale (Feet)



Base Map Source: ESRI, USGS, NOAA, 2017

Figure 2 - Off-Site Parking Locations



--- Project Boundary    ..... Anticipated Off-Site Parking    — No Curbside Parking Allowed

■ On-Site Parking Lot

0 800  
Scale (Feet)



Base Map Source: ESRI, USGS, NOAA, 2017





Wilson Middle School Multi-Purpose Field  
**Proposed Development Plan**

## Appendix B. Traffic Counts

## Appendices

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City of Glendale  
N/S: SR-134W Ramps/Cordova Avenue  
E/W: Monterey Road  
Weather: Clear

File Name : 01\_GDE\_134W\_Monterey Tues PM  
Site Code : 22119656  
Start Date : 10/8/2019  
Page No : 1

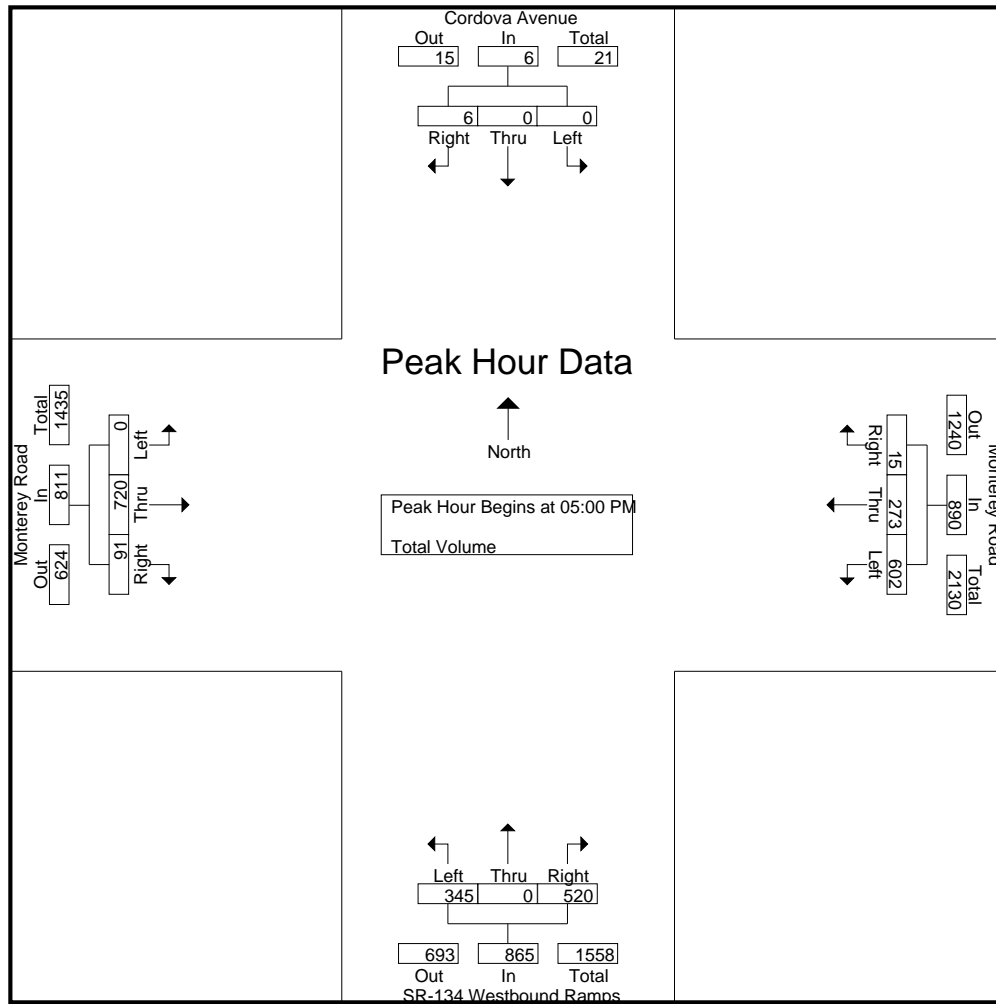
Groups Printed- Total Volume

	Cordova Avenue Southbound				Monterey Road Westbound				SR-134 Westbound Ramps Northbound				Monterey Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	156	61	2	219	43	0	113	156	0	145	20	165	540
04:15 PM	0	0	1	1	142	51	1	194	70	0	114	184	0	150	29	179	558
04:30 PM	0	0	0	0	138	59	1	198	65	0	112	177	0	149	28	177	552
04:45 PM	0	0	0	0	145	63	3	211	73	0	103	176	0	152	20	172	559
Total	0	0	1	1	581	234	7	822	251	0	442	693	0	596	97	693	2209
05:00 PM	0	0	3	3	168	72	4	244	79	0	131	210	0	160	21	181	638
05:15 PM	0	0	1	1	153	68	5	226	93	0	111	204	0	185	20	205	636
05:30 PM	0	0	1	1	155	75	4	234	84	0	145	229	0	202	30	232	696
05:45 PM	0	0	1	1	126	58	2	186	89	0	133	222	0	173	20	193	602
Total	0	0	6	6	602	273	15	890	345	0	520	865	0	720	91	811	2572
Grand Total	0	0	7	7	1183	507	22	1712	596	0	962	1558	0	1316	188	1504	4781
Apprch %	0	0	100		69.1	29.6	1.3		38.3	0	61.7		0	87.5	12.5		
Total %	0	0	0.1	0.1	24.7	10.6	0.5	35.8	12.5	0	20.1	32.6	0	27.5	3.9	31.5	

	Cordova Avenue Southbound				Monterey Road Westbound				SR-134 Westbound Ramps Northbound				Monterey Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	<b>3</b>	<b>3</b>	<b>168</b>	72	4	<b>244</b>	79	0	131	210	0	160	21	181	638
05:15 PM	0	0	1	1	153	68	<b>5</b>	226	<b>93</b>	0	111	204	0	185	20	205	636
05:30 PM	0	0	1	1	155	<b>75</b>	4	234	84	0	<b>145</b>	<b>229</b>	0	<b>202</b>	<b>30</b>	<b>232</b>	<b>696</b>
05:45 PM	0	0	1	1	126	58	2	186	89	0	133	222	0	173	20	193	602
Total Volume	0	0	6	6	602	273	15	890	345	0	520	865	0	720	91	811	2572
% App. Total	0	0	100		67.6	30.7	1.7		39.9	0	60.1		0	88.8	11.2		
PHF	.000	.000	.500	.500	.896	.910	.750	.912	.927	.000	.897	.944	.000	.891	.758	.874	.924

City of Glendale  
N/S: SR-134W Ramps/Cordova Avenue  
E/W: Monterey Road  
Weather: Clear

File Name : 01\_GDE\_134W\_Monterey Tues PM  
Site Code : 22119656  
Start Date : 10/8/2019  
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

	05:00 PM				04:45 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	3	3	145	63	3	211	79	0	131	210	0	160	21	181
+15 mins.	0	0	1	1	168	72	4	244	93	0	111	204	0	185	20	205
+30 mins.	0	0	1	1	153	68	5	226	84	0	145	229	0	202	30	232
+45 mins.	0	0	1	1	155	75	4	234	89	0	133	222	0	173	20	193
Total Volume	0	0	6	6	621	278	16	915	345	0	520	865	0	720	91	811
% App. Total	0	0	100		67.9	30.4	1.7		39.9	0	60.1		0	88.8	11.2	
PHF	.000	.000	.500	.500	.924	.927	.800	.938	.927	.000	.897	.944	.000	.891	.758	.874

City of Glendale  
N/S: Glendale Avenue  
E/W: SR-134 Eastbound Ramps  
Weather: Clear

File Name : 02\_GDE\_Glendale\_134E Tues PM  
Site Code : 22119656  
Start Date : 10/8/2019  
Page No : 1

Groups Printed- Total Volume

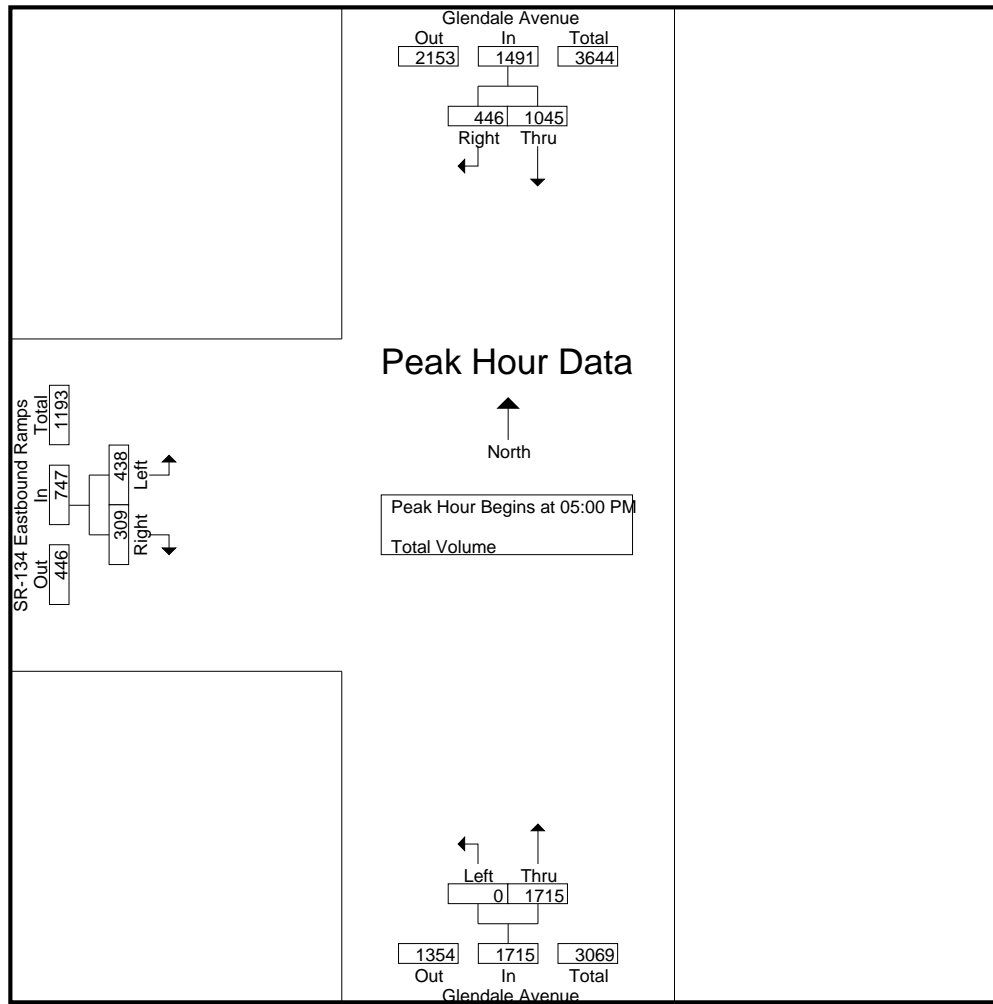
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Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	237	94	331	0	443	443	93	99	192	966
04:15 PM	201	102	303	0	381	381	98	92	190	874
04:30 PM	212	110	322	0	392	392	119	74	193	907
04:45 PM	226	112	338	0	468	468	80	72	152	958
Total	876	418	1294	0	1684	1684	390	337	727	3705
05:00 PM	262	100	362	0	426	426	106	60	166	954
05:15 PM	251	137	388	0	474	474	100	69	169	1031
05:30 PM	262	113	375	0	400	400	126	95	221	996
05:45 PM	270	96	366	0	415	415	106	85	191	972
Total	1045	446	1491	0	1715	1715	438	309	747	3953
Grand Total	1921	864	2785	0	3399	3399	828	646	1474	7658
Apprch %	69	31		0	100		56.2	43.8		
Total %	25.1	11.3	36.4	0	44.4	44.4	10.8	8.4	19.2	

	Glendale Avenue Southbound			Glendale Avenue Northbound			SR-134 Eastbound Ramps Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	262	100	362	0	426	426	106	60	166	954
05:15 PM	251	<b>137</b>	<b>388</b>	0	<b>474</b>	<b>474</b>	100	69	169	<b>1031</b>
05:30 PM	262	113	375	0	400	400	<b>126</b>	<b>95</b>	<b>221</b>	996
05:45 PM	<b>270</b>	96	366	0	415	415	106	85	191	972
Total Volume	1045	446	1491	0	1715	1715	438	309	747	3953
% App. Total	70.1	29.9		0	100		58.6	41.4		
PHF	.968	.814	.961	.000	.905	.905	.869	.813	.845	.959



City of Glendale  
N/S: Glendale Avenue  
E/W: SR-134 Eastbound Ramps  
Weather: Clear

File Name : 02\_GDE\_Glendale\_134E Tues PM  
Site Code : 22119656  
Start Date : 10/8/2019  
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

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+0 mins.	262	100	362	0	468	468	106	60	166
+15 mins.	251	<b>137</b>	<b>388</b>	0	426	426	100	69	169
+30 mins.	262	113	375	0	<b>474</b>	<b>474</b>	<b>126</b>	<b>95</b>	<b>221</b>
+45 mins.	<b>270</b>	96	366	0	400	400	106	85	191
Total Volume	1045	446	1491	0	1768	1768	438	309	747
% App. Total	70.1	29.9		0	100		58.6	41.4	
PHF	.968	.814	.961	.000	.932	.932	.869	.813	.845

City of Glendale  
N/S: Glendale Avenue  
E/W: Monterey Road  
Weather: Clear

File Name : 03\_GDE\_Glendale\_Monterey Tues PM  
Site Code : 22119656  
Start Date : 10/8/2019  
Page No : 1

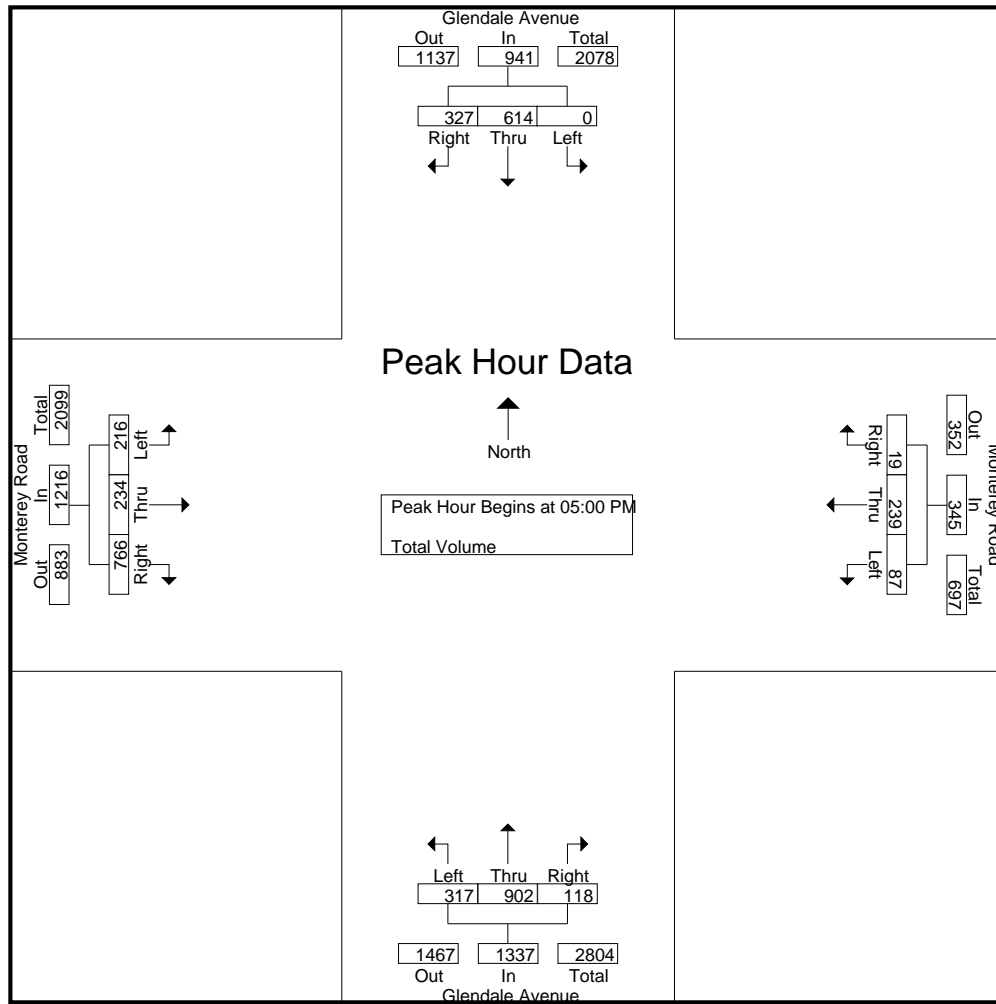
Groups Printed- Total Volume

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04:00 PM	0	118	76	194	16	46	13	75	104	180	23	307	28	45	182	255	831
04:15 PM	0	105	74	179	28	47	5	80	75	188	19	282	43	55	176	274	815
04:30 PM	0	141	79	220	12	45	5	62	83	209	27	319	45	28	179	252	853
04:45 PM	0	138	79	217	10	47	6	63	89	229	28	346	39	44	183	266	892
Total	0	502	308	810	66	185	29	280	351	806	97	1254	155	172	720	1047	3391
05:00 PM	0	158	94	252	21	53	6	80	93	225	31	349	44	48	181	273	954
05:15 PM	0	161	74	235	28	74	7	109	80	231	28	339	55	52	191	298	981
05:30 PM	0	152	86	238	17	70	4	91	77	234	25	336	60	73	194	327	992
05:45 PM	0	143	73	216	21	42	2	65	67	212	34	313	57	61	200	318	912
Total	0	614	327	941	87	239	19	345	317	902	118	1337	216	234	766	1216	3839
Grand Total	0	1116	635	1751	153	424	48	625	668	1708	215	2591	371	406	1486	2263	7230
Apprch %	0	63.7	36.3		24.5	67.8	7.7		25.8	65.9	8.3		16.4	17.9	65.7		
Total %	0	15.4	8.8	24.2	2.1	5.9	0.7	8.6	9.2	23.6	3	35.8	5.1	5.6	20.6	31.3	

	Glendale Avenue Southbound				Monterey Road Westbound				Glendale Avenue Northbound				Monterey Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	158	<b>94</b>	<b>252</b>	21	53	6	80	<b>93</b>	225	31	<b>349</b>	44	48	181	273	954
05:15 PM	0	<b>161</b>	74	235	<b>28</b>	<b>74</b>	<b>7</b>	<b>109</b>	80	231	28	339	55	52	191	298	981
05:30 PM	0	152	86	238	17	70	4	91	77	<b>234</b>	25	336	<b>60</b>	<b>73</b>	194	<b>327</b>	<b>992</b>
05:45 PM	0	143	73	216	21	42	2	65	67	212	<b>34</b>	313	57	61	<b>200</b>	318	912
Total Volume	0	614	327	941	87	239	19	345	317	902	118	1337	216	234	766	1216	3839
% App. Total	0	65.2	34.8		25.2	69.3	5.5		23.7	67.5	8.8		17.8	19.2	63		
PHF	.000	.953	.870	.934	.777	.807	.679	.791	.852	.964	.868	.958	.900	.801	.958	.930	.967

City of Glendale  
N/S: Glendale Avenue  
E/W: Monterey Road  
Weather: Clear

File Name : 03\_GDE\_Glendale\_Monterey Tues PM  
Site Code : 22119656  
Start Date : 10/8/2019  
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

	04:45 PM				05:00 PM				04:45 PM				05:00 PM			
+0 mins.	0	138	79	217	21	53	6	80	89	229	28	346	44	48	181	273
+15 mins.	0	158	<b>94</b>	<b>252</b>	<b>28</b>	<b>74</b>	<b>7</b>	<b>109</b>	<b>93</b>	225	<b>31</b>	<b>349</b>	55	52	191	298
+30 mins.	0	<b>161</b>	74	235	17	70	4	91	80	231	28	339	<b>60</b>	<b>73</b>	194	<b>327</b>
+45 mins.	0	152	86	238	21	42	2	65	77	<b>234</b>	25	336	57	61	<b>200</b>	318
Total Volume	0	609	333	942	87	239	19	345	339	919	112	1370	216	234	766	1216
% App. Total	0	64.6	35.4		25.2	69.3	5.5		24.7	67.1	8.2		17.8	19.2	63	
PHF	.000	.946	.886	.935	.777	.807	.679	.791	.911	.982	.903	.981	.900	.801	.958	.930

City of Glendale  
N/S: Glendale Avenue  
E/W: Glenoaks Boulevard  
Weather: Clear

File Name : 04\_GDE\_Glendale\_Glenoaks Tues PM  
Site Code : 22119656  
Start Date : 10/8/2019  
Page No : 1

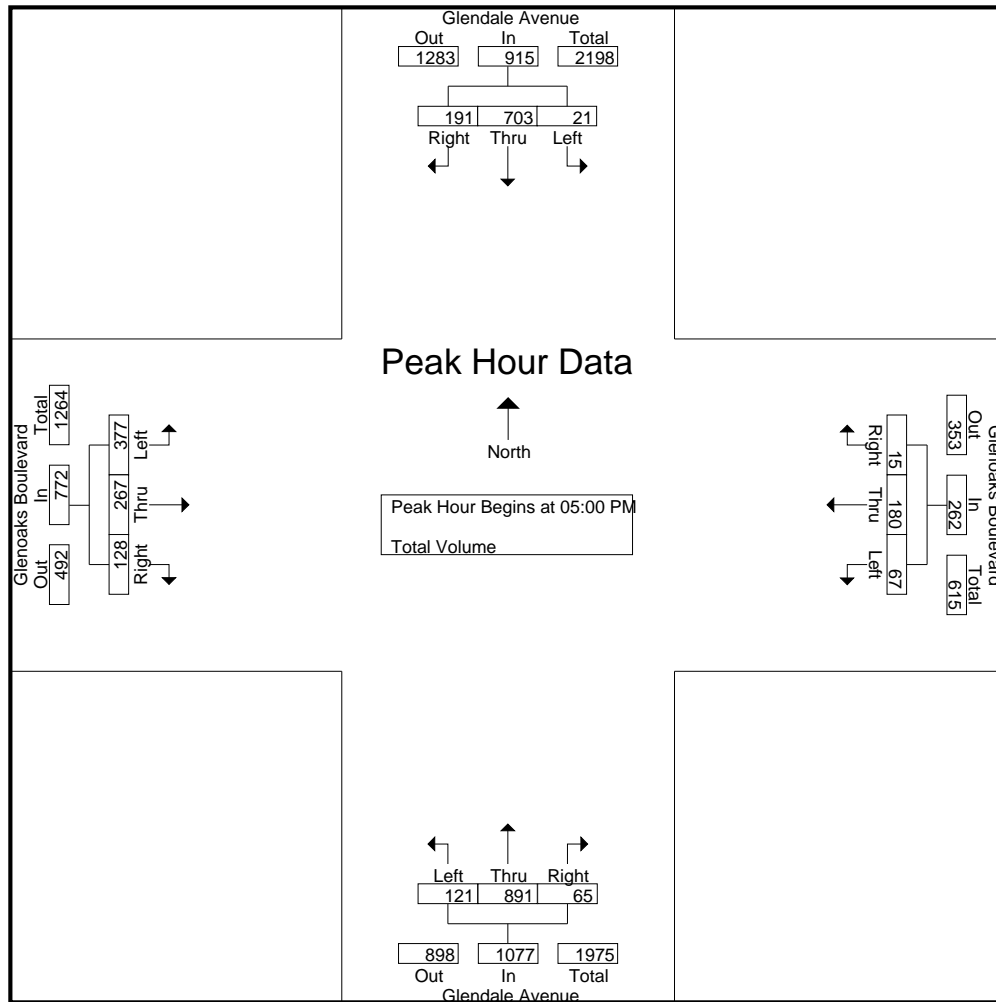
Groups Printed- Total Volume

	Glendale Avenue Southbound				Glenoaks Boulevard Westbound				Glendale Avenue Northbound				Glenoaks Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	142	39	182	17	30	4	51	37	188	11	236	80	47	24	151	620
04:15 PM	4	180	52	236	14	24	3	41	24	186	22	232	75	33	29	137	646
04:30 PM	5	150	38	193	20	30	4	54	31	219	14	264	88	52	35	175	686
04:45 PM	11	133	39	183	12	32	6	50	30	225	18	273	81	50	32	163	669
Total	21	605	168	794	63	116	17	196	122	818	65	1005	324	182	120	626	2621
05:00 PM	4	190	53	247	11	50	5	66	29	241	18	288	88	73	33	194	795
05:15 PM	6	176	52	234	19	46	3	68	25	222	18	265	96	69	32	197	764
05:30 PM	4	160	45	209	19	50	4	73	37	207	14	258	102	60	31	193	733
05:45 PM	7	177	41	225	18	34	3	55	30	221	15	266	91	65	32	188	734
Total	21	703	191	915	67	180	15	262	121	891	65	1077	377	267	128	772	3026
Grand Total	42	1308	359	1709	130	296	32	458	243	1709	130	2082	701	449	248	1398	5647
Apprch %	2.5	76.5	21		28.4	64.6	7		11.7	82.1	6.2		50.1	32.1	17.7		
Total %	0.7	23.2	6.4	30.3	2.3	5.2	0.6	8.1	4.3	30.3	2.3	36.9	12.4	8	4.4	24.8	

	Glendale Avenue Southbound				Glenoaks Boulevard Westbound				Glendale Avenue Northbound				Glenoaks Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	4	<b>190</b>	<b>53</b>	<b>247</b>	11	<b>50</b>	<b>5</b>	66	29	<b>241</b>	<b>18</b>	<b>288</b>	88	<b>73</b>	<b>33</b>	194	<b>795</b>
05:15 PM	6	176	52	234	<b>19</b>	46	3	68	25	222	18	265	96	69	32	<b>197</b>	764
05:30 PM	4	160	45	209	19	50	4	<b>73</b>	<b>37</b>	207	14	258	<b>102</b>	60	31	193	733
05:45 PM	<b>7</b>	177	41	225	18	34	3	55	30	221	15	266	91	65	32	188	734
Total Volume	21	703	191	915	67	180	15	262	121	891	65	1077	377	267	128	772	3026
% App. Total	2.3	76.8	20.9		25.6	68.7	5.7		11.2	82.7	6		48.8	34.6	16.6		
PHF	.750	.925	.901	.926	.882	.900	.750	.897	.818	.924	.903	.935	.924	.914	.970	.980	.952

City of Glendale  
N/S: Glendale Avenue  
E/W: Glenoaks Boulevard  
Weather: Clear

File Name : 04\_GDE\_Glendale\_Glenoaks Tues PM  
Site Code : 22119656  
Start Date : 10/8/2019  
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				04:30 PM				05:00 PM			
+0 mins.	4	190	53	247	11	50	5	66	31	219	14	264	88	73	33	194
+15 mins.	6	176	52	234	19	46	3	68	30	225	18	273	96	69	32	197
+30 mins.	4	160	45	209	19	50	4	73	29	241	18	288	102	60	31	193
+45 mins.	7	177	41	225	18	34	3	55	25	222	18	265	91	65	32	188
Total Volume	21	703	191	915	67	180	15	262	115	907	68	1090	377	267	128	772
% App. Total	2.3	76.8	20.9		25.6	68.7	5.7		10.6	83.2	6.2		48.8	34.6	16.6	
PHF	.750	.925	.901	.926	.882	.900	.750	.897	.927	.941	.944	.946	.924	.914	.970	.980

City of Glendale  
N/S: Adams Street  
E/W: Monterey Road  
Weather: Clear

File Name : 05\_GDE\_Adams\_Monterey Tues PM  
Site Code : 22119656  
Start Date : 10/8/2019  
Page No : 1

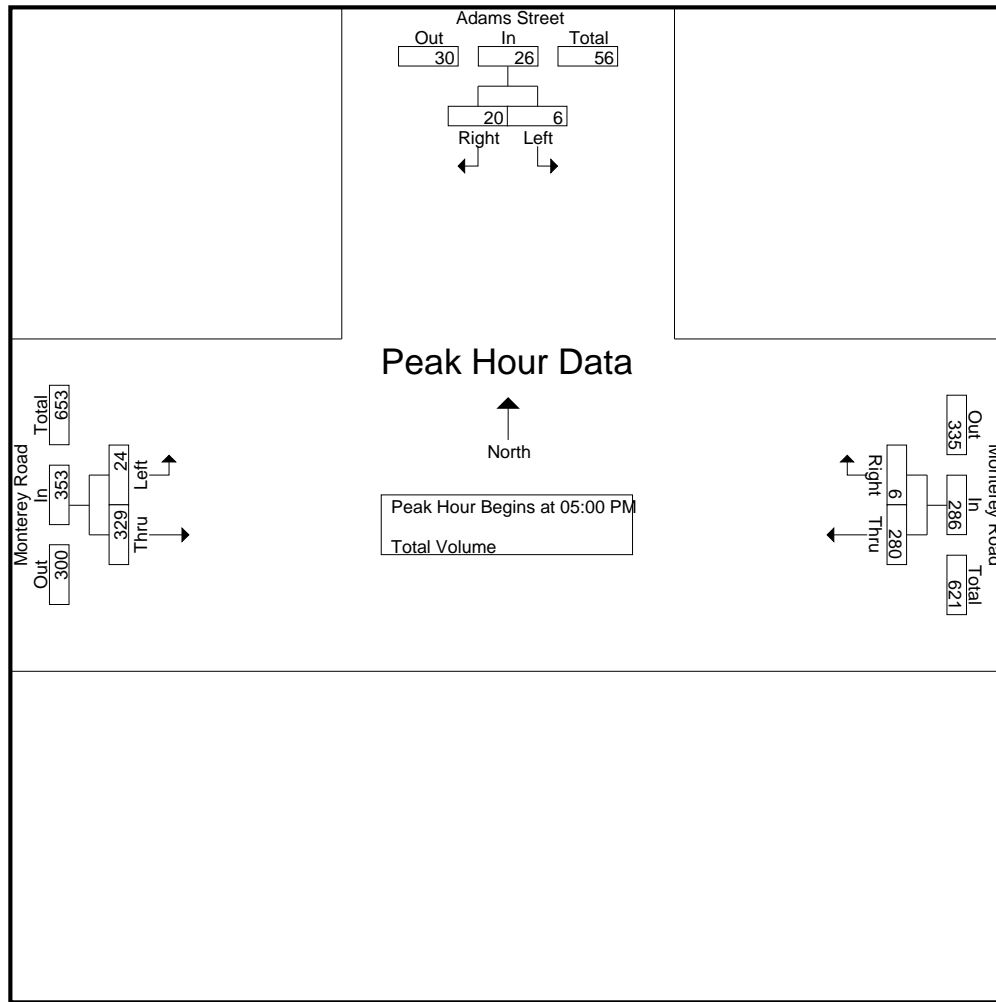
Groups Printed- Total Volume

	Adams Street Southbound			Monterey Road Westbound			Monterey Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	2	3	5	68	4	72	5	63	68	145
04:15 PM	2	1	3	60	5	65	2	74	76	144
04:30 PM	2	6	8	57	2	59	3	51	54	121
04:45 PM	2	5	7	50	2	52	5	67	72	131
Total	8	15	23	235	13	248	15	255	270	541
05:00 PM	3	4	7	71	2	73	9	70	79	159
05:15 PM	1	8	9	89	1	90	5	75	80	179
05:30 PM	2	4	6	74	3	77	5	98	103	186
05:45 PM	0	4	4	46	0	46	5	86	91	141
Total	6	20	26	280	6	286	24	329	353	665
Grand Total	14	35	49	515	19	534	39	584	623	1206
Apprch %	28.6	71.4		96.4	3.6		6.3	93.7		
Total %	1.2	2.9	4.1	42.7	1.6	44.3	3.2	48.4	51.7	

	Adams Street Southbound			Monterey Road Westbound			Monterey Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	<b>3</b>	4	7	71	2	73	<b>9</b>	70	79	159
05:15 PM	1	<b>8</b>	<b>9</b>	<b>89</b>	1	<b>90</b>	5	75	80	179
05:30 PM	2	4	6	74	<b>3</b>	77	5	<b>98</b>	<b>103</b>	<b>186</b>
05:45 PM	0	4	4	46	0	46	5	86	91	141
Total Volume	6	20	26	280	6	286	24	329	353	665
% App. Total	23.1	76.9		97.9	2.1		6.8	93.2		
PHF	.500	.625	.722	.787	.500	.794	.667	.839	.857	.894

City of Glendale  
N/S: Adams Street  
E/W: Monterey Road  
Weather: Clear

File Name : 05\_GDE\_Adams\_Monterey Tues PM  
Site Code : 22119656  
Start Date : 10/8/2019  
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:30 PM			04:45 PM			05:00 PM		
+0 mins.	2	6	8	50	2	52	9	70	79
+15 mins.	2	5	7	71	2	73	5	75	80
+30 mins.	3	4	7	89	1	90	5	98	103
+45 mins.	1	8	9	74	3	77	5	86	91
Total Volume	8	23	31	284	8	292	24	329	353
% App. Total	25.8	74.2		97.3	2.7		6.8	93.2	
PHF	.667	.719	.861	.798	.667	.811	.667	.839	.857

City of Glendale  
N/S: Verdugo Circle Drive/Adams Street  
E/W: Glenoaks Boulevard  
Weather: Clear

File Name : 06\_GDE\_Adams\_Glenoaks Tues PM  
Site Code : 22119656  
Start Date : 10/8/2019  
Page No : 1

Groups Printed- Total Volume

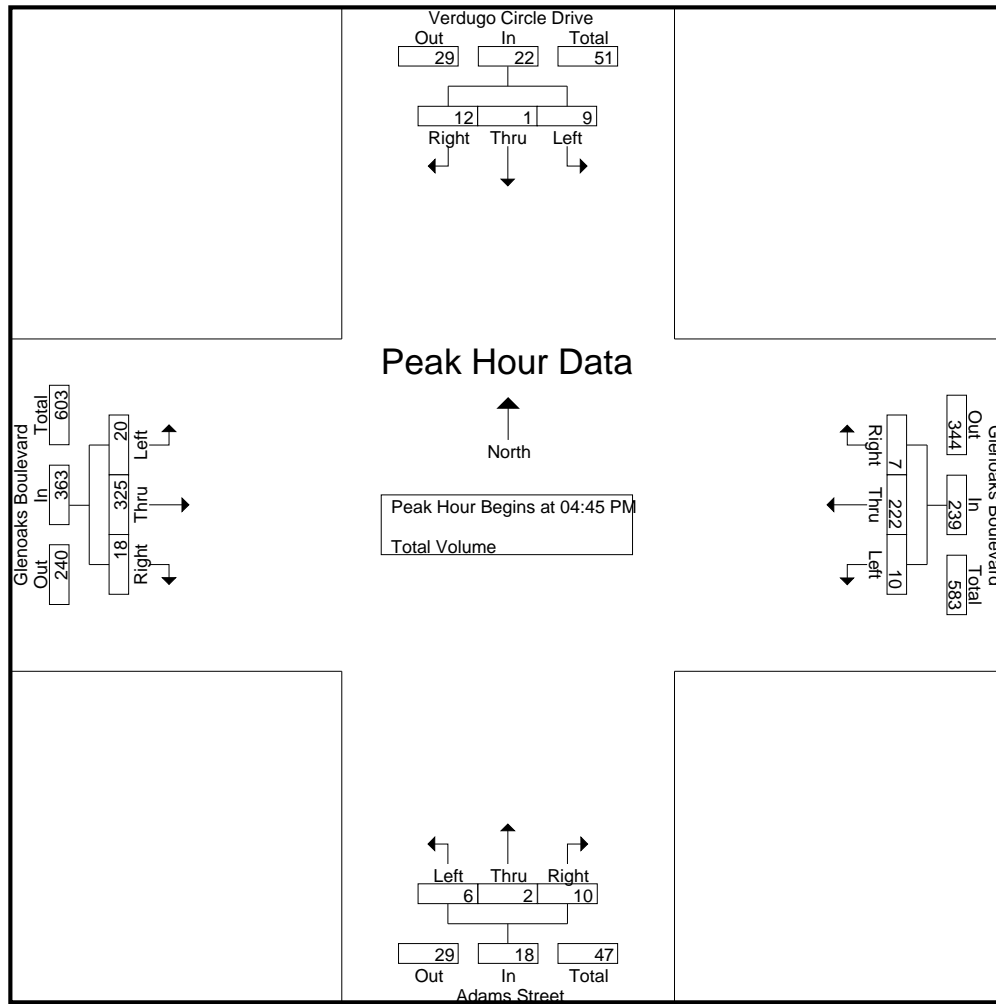
	Verdugo Circle Drive Southbound				Glenoaks Boulevard Westbound				Adams Street Northbound				Glenoaks Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	0	2	3	1	51	0	52	1	0	3	4	4	35	2	41	100
04:15 PM	1	0	2	3	3	48	1	52	2	0	3	5	2	44	2	48	108
04:30 PM	1	0	2	3	3	50	0	53	1	0	2	3	1	54	3	58	117
04:45 PM	1	0	0	1	0	57	3	60	0	0	2	2	7	75	6	88	151
Total	4	0	6	10	7	206	4	217	4	0	10	14	14	208	13	235	476
05:00 PM	4	1	5	10	2	60	1	63	1	1	6	8	7	70	3	80	161
05:15 PM	2	0	7	9	2	56	1	59	3	1	1	5	5	93	5	103	176
05:30 PM	2	0	0	2	6	49	2	57	2	0	1	3	1	87	4	92	154
05:45 PM	0	0	2	2	0	45	0	45	3	0	2	5	1	73	2	76	128
Total	8	1	14	23	10	210	4	224	9	2	10	21	14	323	14	351	619
Grand Total	12	1	20	33	17	416	8	441	13	2	20	35	28	531	27	586	1095
Apprch %	36.4	3	60.6		3.9	94.3	1.8		37.1	5.7	57.1		4.8	90.6	4.6		
Total %	1.1	0.1	1.8	3	1.6	38	0.7	40.3	1.2	0.2	1.8	3.2	2.6	48.5	2.5	53.5	

	Verdugo Circle Drive Southbound				Glenoaks Boulevard Westbound				Adams Street Northbound				Glenoaks Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	1	0	0	1	0	57	3	60	0	0	2	2	7	75	6	88	151
05:00 PM	4	1	5	10	2	60	1	63	1	1	6	8	7	70	3	80	161
05:15 PM	2	0	7	9	2	56	1	59	3	1	1	5	5	93	5	103	176
05:30 PM	2	0	0	2	6	49	2	57	2	0	1	3	1	87	4	92	154
Total Volume	9	1	12	22	10	222	7	239	6	2	10	18	20	325	18	363	642
% App. Total	40.9	4.5	54.5		4.2	92.9	2.9		33.3	11.1	55.6		5.5	89.5	5		
PHF	.563	.250	.429	.550	.417	.925	.583	.948	.500	.500	.417	.563	.714	.874	.750	.881	.912



City of Glendale  
N/S: Verdugo Circle Drive/Adams Street  
E/W: Glenoaks Boulevard  
Weather: Clear

File Name : 06\_GDE\_Adams\_Glenoaks Tues PM  
Site Code : 22119656  
Start Date : 10/8/2019  
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

	04:30 PM				04:45 PM				05:00 PM				04:45 PM			
+0 mins.	1	0	2	3	0	57	3	60	1	1	6	8	7	75	6	88
+15 mins.	1	0	0	1	2	60	1	63	3	1	1	5	7	70	3	80
+30 mins.	4	1	5	10	2	56	1	59	2	0	1	3	5	93	5	103
+45 mins.	2	0	7	9	6	49	2	57	3	0	2	5	1	87	4	92
Total Volume	8	1	14	23	10	222	7	239	9	2	10	21	20	325	18	363
% App. Total	34.8	4.3	60.9		4.2	92.9	2.9		42.9	9.5	47.6		5.5	89.5	5	
PHF	.500	.250	.500	.575	.417	.925	.583	.948	.750	.500	.417	.656	.714	.874	.750	.881

City of Glendale  
N/S: Verdugo Road  
E/W: Monterey Road  
Weather: Clear

File Name : 07\_GDE\_Verdugo\_Monterey Tues PM  
Site Code : 22119656  
Start Date : 10/8/2019  
Page No : 1

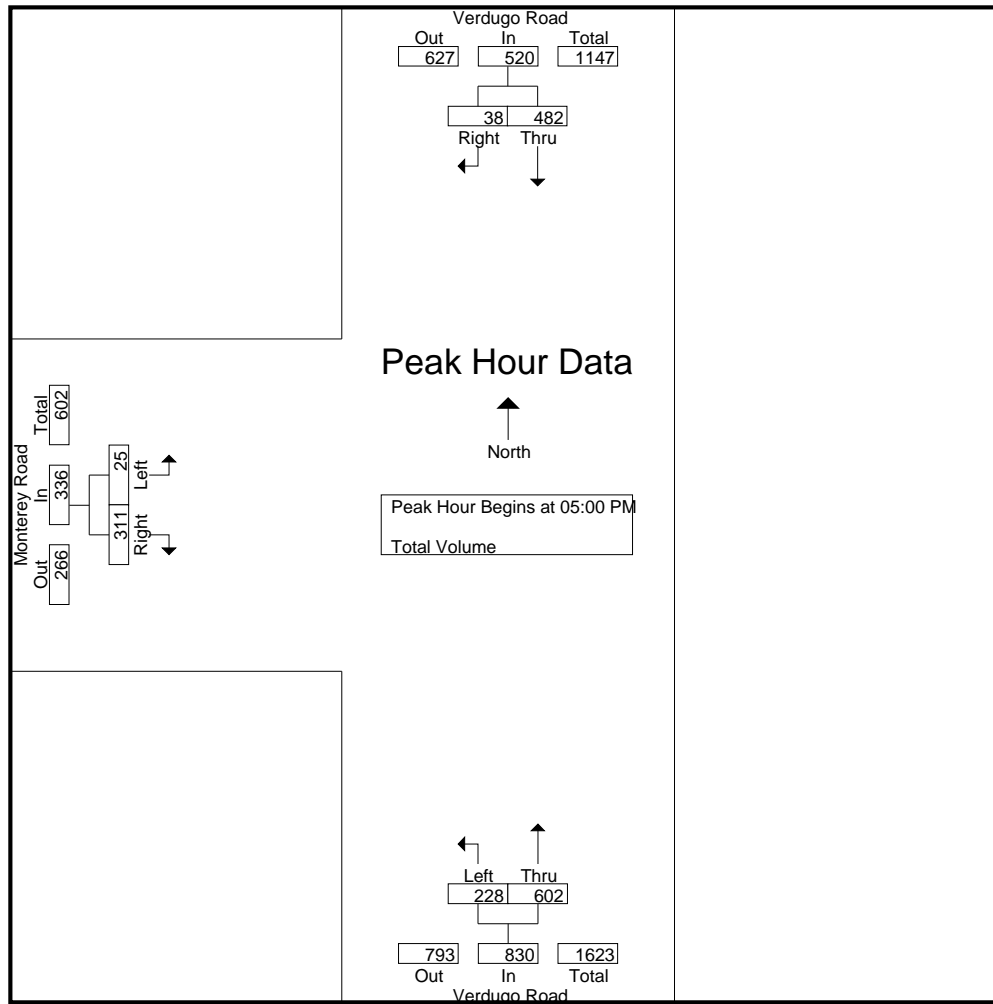
Groups Printed- Total Volume

	Verdugo Road Southbound			Verdugo Road Northbound			Monterey Road Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	98	9	107	45	106	151	5	59	64	322
04:15 PM	97	16	113	45	144	189	5	68	73	375
04:30 PM	121	3	124	54	114	168	5	51	56	348
04:45 PM	97	11	108	42	165	207	8	60	68	383
Total	413	39	452	186	529	715	23	238	261	1428
05:00 PM	133	10	143	61	172	233	3	60	63	439
05:15 PM	113	14	127	66	141	207	12	77	89	423
05:30 PM	114	7	121	60	135	195	5	84	89	405
05:45 PM	122	7	129	41	154	195	5	90	95	419
Total	482	38	520	228	602	830	25	311	336	1686
Grand Total	895	77	972	414	1131	1545	48	549	597	3114
Apprch %	92.1	7.9		26.8	73.2		8	92		
Total %	28.7	2.5	31.2	13.3	36.3	49.6	1.5	17.6	19.2	

	Verdugo Road Southbound			Verdugo Road Northbound			Monterey Road Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	<b>133</b>	10	<b>143</b>	61	<b>172</b>	<b>233</b>	3	60	63	<b>439</b>
05:15 PM	113	<b>14</b>	127	<b>66</b>	141	207	<b>12</b>	77	89	423
05:30 PM	114	7	121	60	135	195	5	84	89	405
05:45 PM	122	7	129	41	154	195	5	<b>90</b>	<b>95</b>	419
Total Volume	482	38	520	228	602	830	25	311	336	1686
% App. Total	92.7	7.3		27.5	72.5		7.4	92.6		
PHF	.906	.679	.909	.864	.875	.891	.521	.864	.884	.960

City of Glendale  
N/S: Verdugo Road  
E/W: Monterey Road  
Weather: Clear

File Name : 07\_GDE\_Verdugo\_Monterey Tues PM  
Site Code : 22119656  
Start Date : 10/8/2019  
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

	05:00 PM			04:45 PM			05:00 PM		
+0 mins.	<b>133</b>	10	<b>143</b>	42	165	207	3	60	63
+15 mins.	113	<b>14</b>	127	61	<b>172</b>	<b>233</b>	<b>12</b>	77	89
+30 mins.	114	7	121	<b>66</b>	141	207	5	84	89
+45 mins.	122	7	129	60	135	195	5	<b>90</b>	<b>95</b>
Total Volume	482	38	520	229	613	842	25	311	336
% App. Total	92.7	7.3		27.2	72.8		7.4	92.6	
PHF	.906	.679	.909	.867	.891	.903	.521	.864	.884

City of Glendale  
N/S: Verdugo Road  
E/W: Glenoaks Boulevard  
Weather: Clear

File Name : 08\_GDE\_Verdugo\_Glenoaks Tues PM  
Site Code : 22119656  
Start Date : 10/8/2019  
Page No : 1

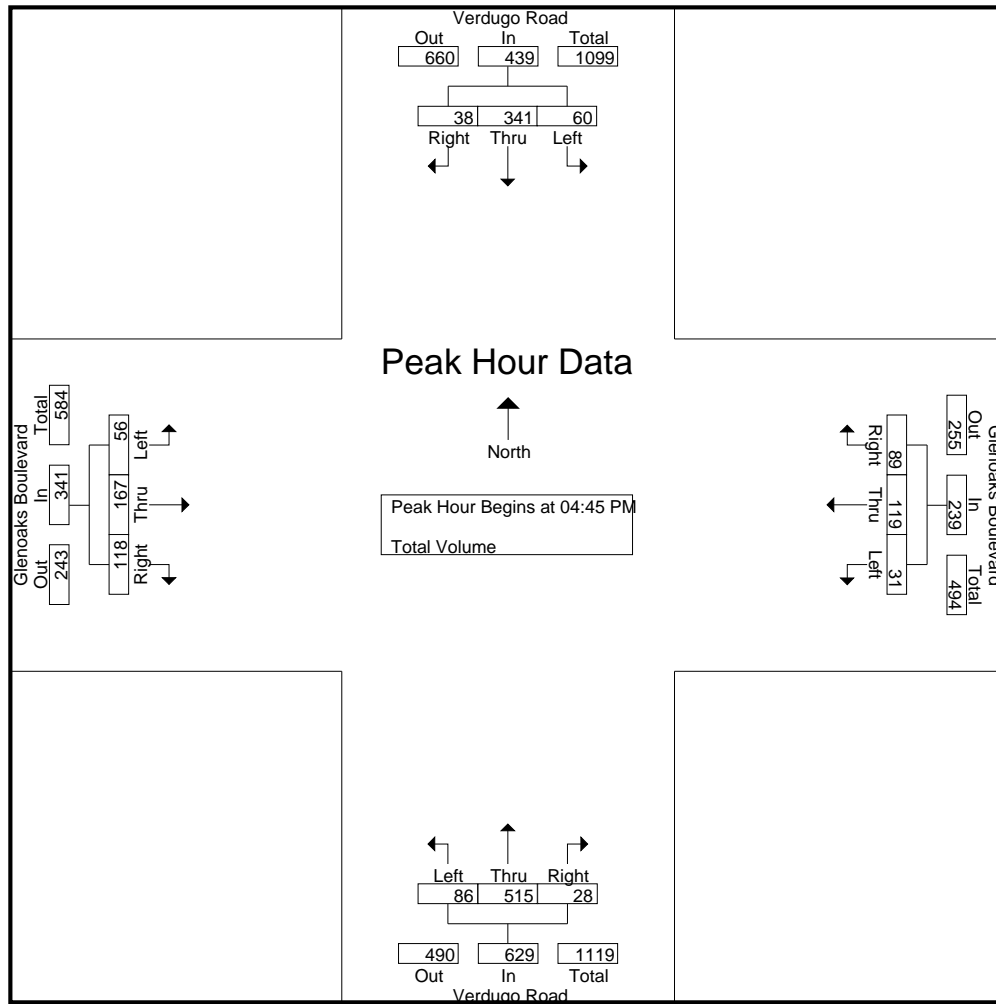
Groups Printed- Total Volume

	Verdugo Road Southbound				Glenoaks Boulevard Westbound				Verdugo Road Northbound				Glenoaks Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	14	76	12	102	4	25	18	47	18	72	11	101	2	19	20	41	291
04:15 PM	7	86	15	108	3	29	16	48	21	118	6	145	4	25	20	49	350
04:30 PM	17	102	10	129	5	23	20	48	14	100	7	121	5	19	20	44	342
04:45 PM	11	82	9	102	9	31	16	56	22	137	7	166	5	48	22	75	399
Total	49	346	46	441	21	108	70	199	75	427	31	533	16	111	82	209	1382
05:00 PM	9	94	10	113	9	36	23	68	21	147	6	174	11	39	27	77	432
05:15 PM	20	86	6	112	6	27	21	54	27	118	7	152	24	39	35	98	416
05:30 PM	20	79	13	112	7	25	29	61	16	113	8	137	16	41	34	91	401
05:45 PM	13	91	10	114	7	16	4	27	19	127	10	156	6	41	28	75	372
Total	62	350	39	451	29	104	77	210	83	505	31	619	57	160	124	341	1621
Grand Total	111	696	85	892	50	212	147	409	158	932	62	1152	73	271	206	550	3003
Apprch %	12.4	78	9.5		12.2	51.8	35.9		13.7	80.9	5.4		13.3	49.3	37.5		
Total %	3.7	23.2	2.8	29.7	1.7	7.1	4.9	13.6	5.3	31	2.1	38.4	2.4	9	6.9	18.3	

	Verdugo Road Southbound				Glenoaks Boulevard Westbound				Verdugo Road Northbound				Glenoaks Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	11	82	9	102	<b>9</b>	31	16	56	22	137	7	166	5	<b>48</b>	22	75	399
05:00 PM	9	<b>94</b>	10	<b>113</b>	9	<b>36</b>	23	<b>68</b>	21	<b>147</b>	6	<b>174</b>	11	39	27	77	<b>432</b>
05:15 PM	<b>20</b>	86	6	112	6	27	21	54	<b>27</b>	118	7	152	<b>24</b>	39	<b>35</b>	<b>98</b>	416
05:30 PM	20	79	<b>13</b>	112	7	25	<b>29</b>	61	16	113	<b>8</b>	137	16	41	34	91	401
Total Volume	60	341	38	439	31	119	89	239	86	515	28	629	56	167	118	341	1648
% App. Total	13.7	77.7	8.7		13	49.8	37.2		13.7	81.9	4.5		16.4	49	34.6		
PHF	.750	.907	.731	.971	.861	.826	.767	.879	.796	.876	.875	.904	.583	.870	.843	.870	.954

City of Glendale  
N/S: Verdugo Road  
E/W: Glenoaks Boulevard  
Weather: Clear

File Name : 08\_GDE\_Verdugo\_Glenoaks Tues PM  
Site Code : 22119656  
Start Date : 10/8/2019  
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

	04:30 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	17	<b>102</b>	<b>10</b>	<b>129</b>	<b>9</b>	31	16	56	22	137	7	166	5	<b>48</b>	22	75
+15 mins.	11	82	9	102	9	<b>36</b>	23	<b>68</b>	21	<b>147</b>	6	<b>174</b>	11	39	27	77
+30 mins.	9	94	10	113	6	27	21	54	<b>27</b>	118	7	152	<b>24</b>	39	<b>35</b>	<b>98</b>
+45 mins.	<b>20</b>	86	6	112	7	25	<b>29</b>	61	16	113	<b>8</b>	137	16	41	34	91
Total Volume	57	364	35	456	31	119	89	239	86	515	28	629	56	167	118	341
% App. Total	12.5	79.8	7.7		13	49.8	37.2		13.7	81.9	4.5		16.4	49	34.6	
PHF	.713	.892	.875	.884	.861	.826	.767	.879	.796	.876	.875	.904	.583	.870	.843	.870

City of Glendale  
 Adams Street  
 B/ Glenoaks Boulevard - Monterey Road  
 24 Hour Directional Volume Count

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 Phone: (951) 268-6268  
 email: counts@countsunlimited.com

GDE002  
 Site Code: 221-19656

Start Time	08-Oct-19 Tue	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		2	5			1	4				
12:15		1	2			0	4				
12:30		0	1			1	4				
12:45		0	2	3	10	0	8	2	20	5	30
01:00		2	3			2	7				
01:15		0	1			0	9				
01:30		0	4			0	6				
01:45		1	5	3	13	0	5	2	27	5	40
02:00		1	1			1	5				
02:15		0	8			0	4				
02:30		0	18			0	8				
02:45		1	57	2	84	0	38	1	55	3	139
03:00		0	14			0	10				
03:15		1	6			1	4				
03:30		0	3			0	6				
03:45		2	2	3	25	0	7	1	27	4	52
04:00		0	9			0	4				
04:15		0	6			1	2				
04:30		0	3			0	7				
04:45		0	7	0	25	0	6	1	19	1	44
05:00		1	12			0	6				
05:15		1	4			0	10				
05:30		2	5			1	5				
05:45		0	4	4	25	2	3	3	24	7	49
06:00		2	4			1	4				
06:15		0	10			3	3				
06:30		5	4			3	7				
06:45		10	3	17	21	8	3	15	17	32	38
07:00		0	4			8	5				
07:15		8	7			2	2				
07:30		36	3			26	6				
07:45		52	5	96	19	30	2	66	15	162	34
08:00		5	6			3	5				
08:15		3	3			5	0				
08:30		1	3			3	2				
08:45		0	5	9	17	10	2	21	9	30	26
09:00		2	1			7	3				
09:15		3	3			5	2				
09:30		5	2			5	2				
09:45		0	2	10	8	2	3	19	10	29	18
10:00		2	3			2	2				
10:15		4	4			2	1				
10:30		1	1			0	3				
10:45		2	2	9	10	5	3	9	9	18	19
11:00		1	1			9	1				
11:15		2	3			4	0				
11:30		0	0			4	0				
11:45		5	0	8	4	3	0	20	1	28	5
Total		164	261	164	261	160	233	160	233	324	494
Combined Total		425		425		393		393		818	
AM Peak	-	07:15	-	-	-	07:00	-	-	-	-	-
Vol.	-	101	-	-	-	66	-	-	-	-	-
P.H.F.		0.486				0.550					
PM Peak	-	-	02:15	-	-	-	02:15	-	-	-	-
Vol.	-	-	97	-	-	-	60	-	-	-	-
P.H.F.			0.425				0.395				
Percentage		38.6%	61.4%			40.7%	59.3%				
ADT/AADT		ADT 818		AADT 818							

## Appendix C. Intersection Turn Movement Volumes and LOS Worksheets, Existing Conditions

## Appendices

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## Wilson Middle School

Vistro File: Y:\...\Nov\_2019\_WilsonMS.vistro

Scenario 1 Existing Weekday PM

Report File: Y:\...\Existing\_PM.pdf

12/4/2019

**Intersection Analysis Summary**





ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	SR-134 WB Ramps at Monterey Road	Signalized	ICU 1	NB Right	0.849	-	D
2	Glendale Avenue at SR-134 EB Ramps	Signalized	ICU 1	NEB Thru	0.675	-	B
3	Glendale Avenue at Monterey Road	Signalized	ICU 1	EB Right	0.876	-	D
4	Glendale Avenue at Glenoaks Boulevard	Signalized	ICU 1	NEB Thru	0.757	-	C
5	Adams Street at Monterey Road	Two-way stop	HCM 6th Edition	SB Left	0.062	15.4	C
6	Adams Street at Glenoaks Boulevard	Two-way stop	HCM 6th Edition	SB Left	0.028	15.6	C
7	Verdugo Road at Monterey Road	Signalized	ICU 1	EB Right	0.614	-	B
8	Verdugo Road at Glenoaks Boulevard	Signalized	ICU 1	EB Thru	0.511	-	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report**  
**Intersection 1: SR-134 WB Ramps at Monterey Road**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.849

**Intersection Setup**

Name	SR-134 WB Ramps			Cordova Avenue						Monterey Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	SR-134 WB Ramps			Cordova Avenue						Monterey Road		
Base Volume Input [veh/h]	345	0	520	0	0	6	0	720	91	602	273	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0000	1.0000	1.0000	1.0000	1.0300	1.0000	1.0300	1.0300	1.0000	1.0300	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	355	0	520	0	0	6	0	742	94	602	281	15
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	89	0	130	0	0	2	0	186	24	151	70	4
Total Analysis Volume [veh/h]	355	0	520	0	0	6	0	742	94	602	281	15
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Cycle Length [s]	100
Lost time [s]	10.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	0	2	0	0	6	0	8	0	7	4	0
Auxiliary Signal Groups			2									
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-




**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.22	0.00	0.33	0.00	0.00	0.00	0.00	0.23	0.06	0.19	0.19	0.19
Intersection LOS	D											
Intersection V/C	0.849											

**Intersection Level Of Service Report**  
**Intersection 2: Glendale Avenue at SR-134 EB Ramps**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.675

**Intersection Setup**

Name						
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name						
Base Volume Input [veh/h]	0	1882	1037	504	440	359
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1938	1068	519	453	370
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	485	267	130	113	93
Total Analysis Volume [veh/h]	0	1938	1068	519	453	370
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

**Intersection Settings**

Cycle Length [s]	100
Lost time [s]	10.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Overlap	Permissive	Permissive
Signal Group	0	2	6	6	3	0
Auxiliary Signal Groups				6		
Lead / Lag	-	-	-	-	Lead	-





**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.40	0.33	0.32	0.14	0.17
Intersection LOS	B					
Intersection V/C	0.675					

**Intersection Level Of Service Report**  
**Intersection 3: Glendale Avenue at Monterey Road**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.876

**Intersection Setup**

Name				Glendale Avenue			Monterey Road			Monterey Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name				Glendale Avenue			Monterey Road			Monterey Road		
Base Volume Input [veh/h]	317	902	118	0	614	327	216	234	766	87	239	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0000	1.0300	1.0000	1.0000	1.0000	1.0300	1.0300	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	327	929	122	0	632	327	216	234	789	90	239	19
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	82	232	31	0	158	82	54	59	197	23	60	5
Total Analysis Volume [veh/h]	327	929	122	0	632	327	216	234	789	90	239	19
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Cycle Length [s]	100
Lost time [s]	10.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	5	2	0	0	6	0	0	4	4	0	8	0
Auxiliary Signal Groups									4,5			
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-





**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.10	0.33	0.33	0.00	0.13	0.20	0.14	0.15	0.39	0.06	0.08	0.08
Intersection LOS	D											
Intersection V/C	0.876											

**Intersection Level Of Service Report**  
**Intersection 4: Glendale Avenue at Glenoaks Boulevard**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.757

**Intersection Setup**

Name	Glendale Avenue			Glendale Avenue			Glenoaks Blvd			Glenoaks Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left2	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Glendale Avenue			Glendale Avenue			Glenoaks Blvd			Glenoaks Blvd		
Base Volume Input [veh/h]	121	971	65	22	727	172	67	180	14	338	267	128
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0300	1.0000	1.0300	1.0300	1.0300	1.0000	1.0000	1.0300	1.0300	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	121	1000	65	23	749	177	67	180	14	348	267	128
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	250	16	6	187	44	17	45	4	87	67	32
Total Analysis Volume [veh/h]	121	1000	65	23	749	177	67	180	14	348	267	128
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		



**Intersection Settings**

Cycle Length [s]	100
Lost time [s]	10.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-

**Movement, Approach, & Intersection Results**




V/C, Movement V/C Ratio	0.08	0.31	0.04	0.01	0.19	0.19	0.04	0.11	0.01	0.22	0.17	0.08
Intersection LOS	C											
Intersection V/C	0.757											

### Intersection Level Of Service Report

#### Intersection 5: Adams Street at Monterey Road

Control Type:	Two-way stop	Delay (sec / veh):	15.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.062

#### Intersection Setup

Name	Adams Street		Monterey Road			
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

#### Volumes

Name	Adams Street		Monterey Road			
Base Volume Input [veh/h]	20	6	24	329	280	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0000	1.0000	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	6	24	339	288	6
Peak Hour Factor	0.9050	0.9050	0.9050	0.9050	0.9050	0.9050
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	2	7	94	80	2
Total Analysis Volume [veh/h]	23	7	27	375	318	7
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0





**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.06	0.01	0.02	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	15.38	10.67	7.98	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.23	0.23	0.07	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	5.78	5.78	1.68	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.28		0.54		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.85					
Intersection LOS	C					

**Intersection Level Of Service Report**  
**Intersection 6: Adams Street at Glenoaks Boulevard**

Control Type:	Two-way stop	Delay (sec / veh):	15.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.028

**Intersection Setup**

Name	Adams Street			Verdugo Circle Drive			Glenoaks Blvd			Glenoaks Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Adams Street			Verdugo Circle Drive			Glenoaks Blvd			Glenoaks Boulevard		
Base Volume Input [veh/h]	6	2	10	9	1	12	20	325	18	10	222	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	2	10	9	1	12	20	325	18	10	222	7
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	1	3	2	0	3	5	88	5	3	60	2
Total Analysis Volume [veh/h]	7	2	11	10	1	13	22	353	20	11	241	8
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings**

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

**Movement, Approach, & Intersection Results**




V/C, Movement V/C Ratio	0.02	0.01	0.02	0.03	0.00	0.02	0.02	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	15.53	15.26	10.60	15.59	15.37	9.89	7.78	0.00	0.00	8.07	0.00	0.00
Movement LOS	C	C	B	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.13	0.13	0.13	0.15	0.15	0.15	0.05	0.05	0.05	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	3.24	3.24	3.24	3.74	3.74	3.74	1.27	1.27	1.27	0.70	0.70	0.70
d_A, Approach Delay [s/veh]	12.79			12.50			0.43			0.34		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	1.17											
Intersection LOS	C											

### Intersection Level Of Service Report

#### Intersection 7: Verdugo Road at Monterey Road

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.614

#### Intersection Setup

Name			Verdugo Road			
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

#### Volumes

Name			Verdugo Road			
Base Volume Input [veh/h]	228	602	482	38	25	311
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	235	620	496	39	26	320
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	59	155	124	10	7	80
Total Analysis Volume [veh/h]	235	620	496	39	26	320
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

**Intersection Settings**

Cycle Length [s]	100
Lost time [s]	10.00

**Phasing & Timing**

Control Type	ProtPerm	Permissive	Permissive	Permissive	Split	Split
Signal Group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-

**Movement, Approach, & Intersection Results**



V/C, Movement V/C Ratio	0.15	0.19	0.17	0.17	0.02	0.20
Intersection LOS	B					
Intersection V/C	0.614					

### Intersection Level Of Service Report

#### Intersection 8: Verdugo Road at Glenoaks Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.511

#### Intersection Setup

Name	Verdugo Road						Glenoaks Boulevard			Glenoaks Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

#### Volumes

Name	Verdugo Road						Glenoaks Boulevard			Glenoaks Boulevard		
Base Volume Input [veh/h]	86	515	28	60	341	38	56	167	118	31	119	89
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0300	1.0000	1.0300	1.0300	1.0300	1.0300	1.0000	1.0000	1.0000	1.0000	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	86	530	28	62	351	39	58	167	118	31	119	92
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	133	7	16	88	10	15	42	30	8	30	23
Total Analysis Volume [veh/h]	86	530	28	62	351	39	58	167	118	31	119	92
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		



**Intersection Settings**

Cycle Length [s]	100
Lost time [s]	10.00

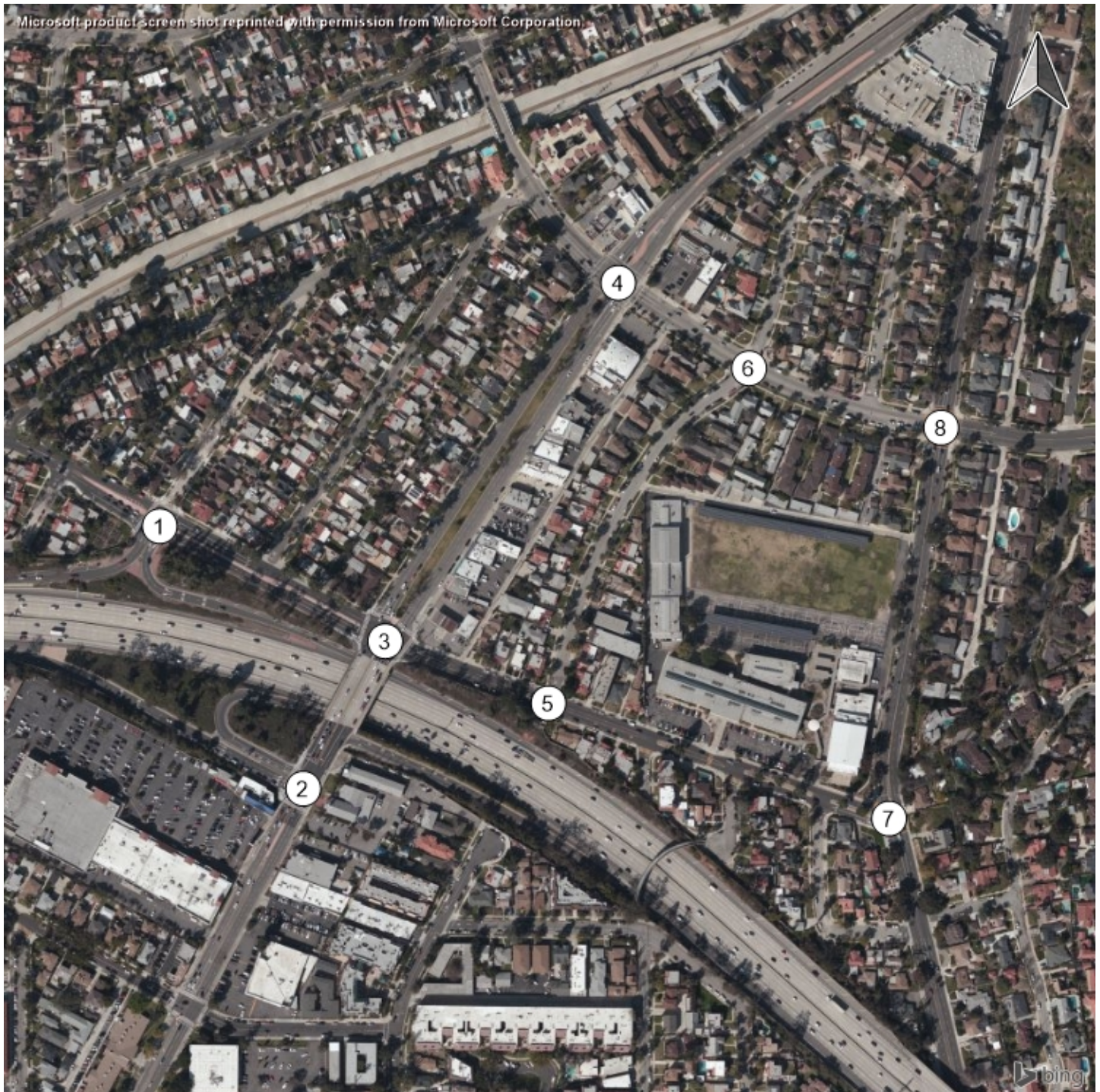
**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-

**Movement, Approach, & Intersection Results**

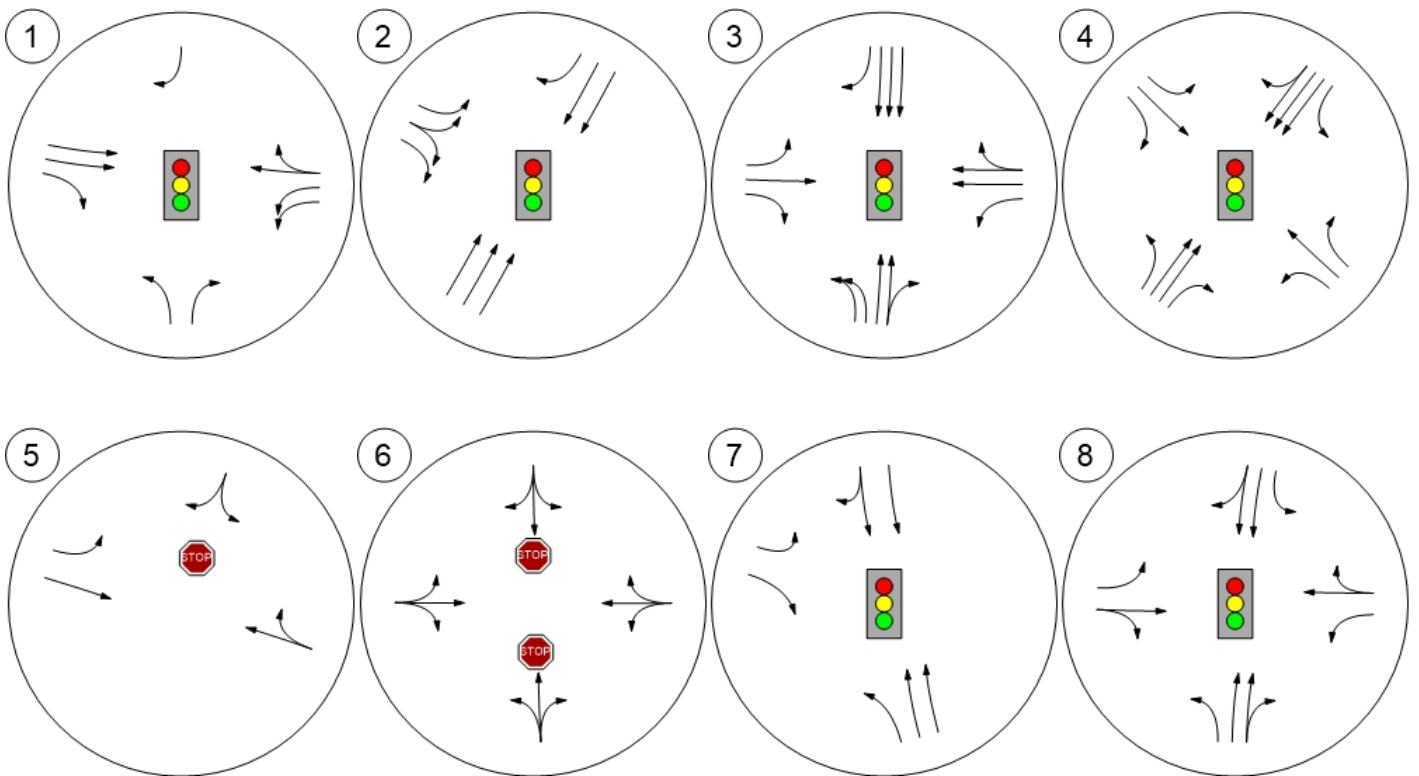
V/C, Movement V/C Ratio	0.05	0.17	0.17	0.04	0.12	0.12	0.04	0.18	0.18	0.02	0.13	0.13
Intersection LOS	A											
Intersection V/C	0.511											

## Study Intersections

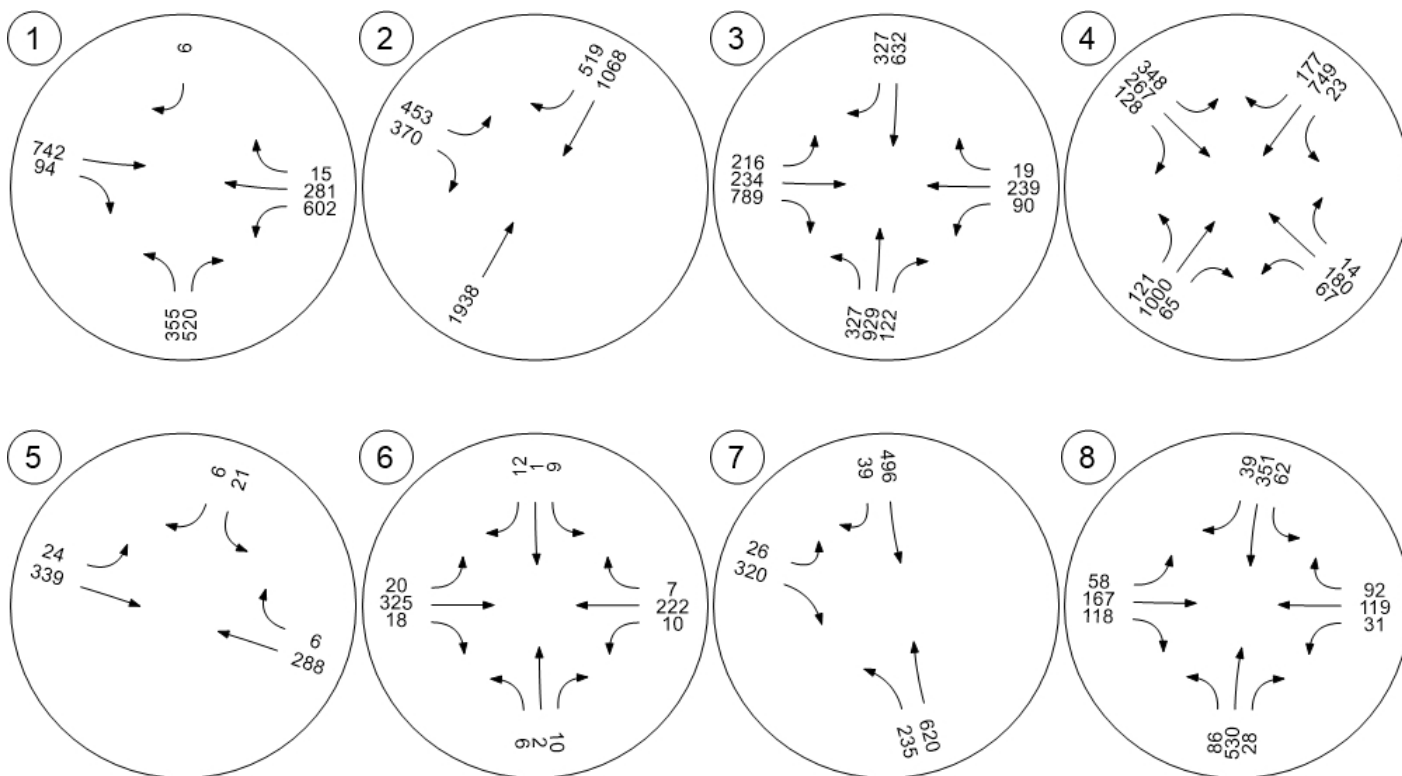
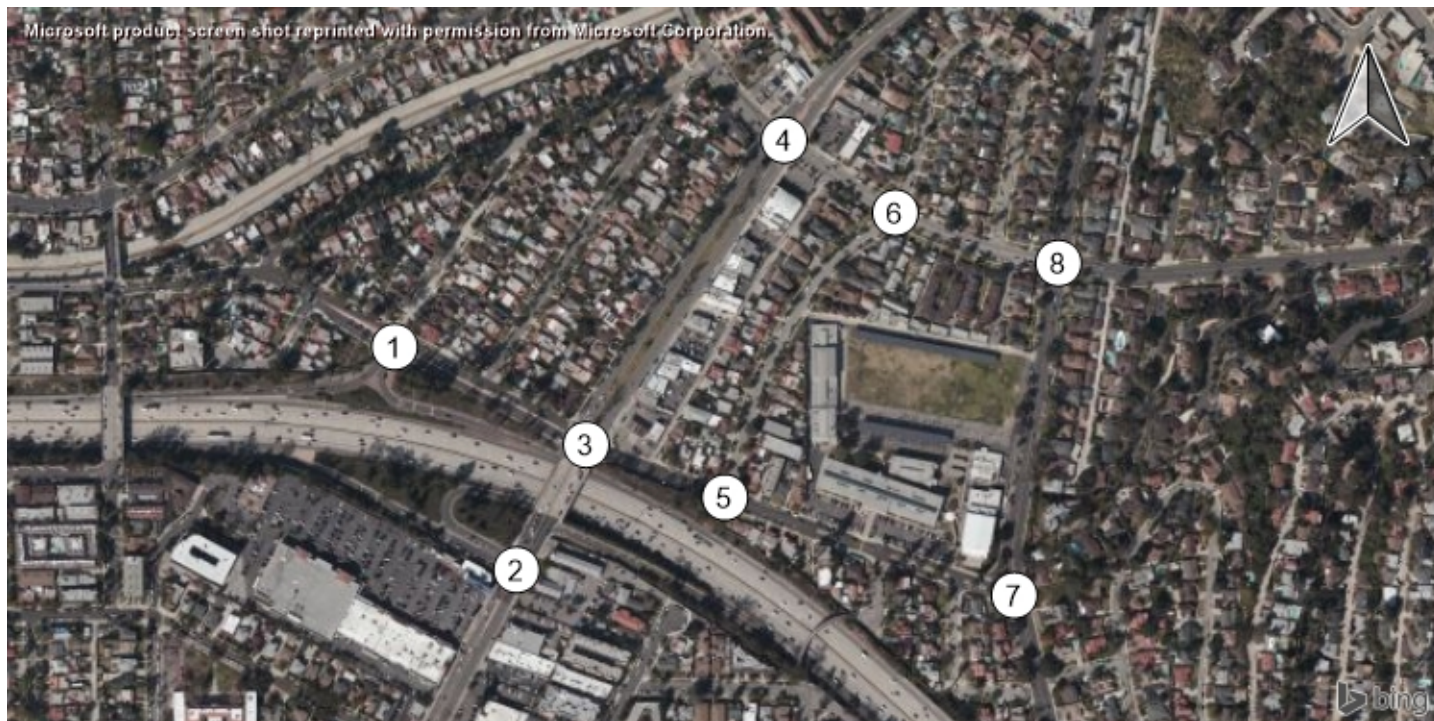




# Lane Configuration and Traffic Control



## Traffic Volume - Future Total Volume



## Appendix D. Parking Counts and Worksheets

## Appendices

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Project Title - Woodrow Wilson Middle School - Glendale, CA  
Parking Occupancy Survey  
Location: Woodrow Wilson Middle School  
Date: Saturday, October 5th, 2019

Parking Lot	Inv	8:00 AM	8:30 AM	9:00 AM	9:30 AM	10:00 AM	10:30 AM	11:00 AM	11:30 AM	12:00 PM	12:30 PM	1:00 PM	1:30 PM	2:00 PM	2:30 PM	3:00 PM	3:30 PM	4:00 PM	4:30 PM	5:00 PM	5:30 PM	6:00 PM	6:30 PM	7:00 PM	7:30 PM	8:00 PM	8:30 PM	9:00 PM	9:30 PM	10:00 PM
Unmarked Stall	65	26	30	29	38	43	37	37	24	24	24	20	31	25	22	33	22	23	24	23	22	5	4	4	4	4	4	4	5	5
Handicapped	4	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Occupancy	69	26	31	30	39	44	38	38	25	25	25	20	31	25	22	33	23	23	24	23	22	5	4	4	4	4	4	4	5	5
Total Percent	-	38%	45%	43%	57%	64%	55%	55%	36%	36%	36%	29%	45%	36%	32%	48%	33%	33%	35%	33%	32%	7%	6%	6%	6%	6%	6%	6%	7%	7%

Street Parking	8:00 AM	8:30 AM	9:00 AM	9:30 AM	10:00 AM	10:30 AM	11:00 AM	11:30 AM	12:00 PM	12:30 PM	1:00 PM	1:30 PM	2:00 PM	2:30 PM	3:00 PM	3:30 PM	4:00 PM	4:30 PM	5:00 PM	5:30 PM	6:00 PM	6:30 PM	7:00 PM	7:30 PM	8:00 PM	8:30 PM	9:00 PM	9:30 PM	10:00 PM
Brianwood Lane	5	4	4	4	4	6	6	4	5	5	5	5	6	6	6	6	7	9	7	7	6	6	6	6	6	5	5	5	5
E Glenoaks Blvd (E)	12	15	13	14	10	7	7	10	9	10	8	6	7	7	8	7	7	5	6	6	4	5	5	6	6	6	6	7	7
E Glenoaks Blvd (C)	66	65	64	58	57	48	51	57	59	58	58	63	53	56	60	56	59	58	55	56	53	53	55	54	52	51	49	49	49
Glenvista Drive (S)	6	5	5	5	5	5	5	5	6	4	4	4	4	4	4	4	5	5	5	5	5	5	6	6	7	7	7	7	7
Glenvista Drive (N)	7	9	9	9	9	9	7	7	5	8	6	8	9	10	11	11	9	9	10	8	7	7	7	7	8	10	11	10	10
Sylvanoak Drive (S)	17	18	18	17	16	15	16	13	9	10	12	12	12	12	12	12	13	15	19	18	17	18	19	19	19	19	19	18	18
Sylvanoak Drive (N)	8	8	6	5	7	8	8	8	8	9	11	11	10	11	11	10	9	9	9	9	10	11	10	10	10	9	9	9	9
N Verdugo Rd	117	117	118	118	118	103	108	111	109	115	112	111	110	108	103	102	103	105	105	103	82	79	81	87	89	91	93	96	99
Verdugo Circle	63	64	67	62	65	62	64	65	70	78	77	71	60	52	52	52	53	57	54	49	50	51	53	56	55	55	54	58	60
N Glendale Avenue	32	36	36	35	35	37	46	41	46	46	49	41	50	48	45	43	41	36	36	32	30	33	29	26	26	28	31	30	22
Monterey Road (W)	3	3	3	3	3	3	2	2	2	2	2	2	2	2	3	3	3	3	3	4	4	5	4	4	4	5	5	5	5
Monterey Road (E)	30	30	29	31	28	28	30	31	29	29	31	31	31	30	29	28	27	27	27	27	27	30	28	26	26	28	27	26	26
Woodbury Road	17	16	16	15	15	14	12	13	13	15	16	13	12	13	14	19	20	21	22	20	20	19	19	19	18	17	15	16	18
Grove Place (N)	6	8	11	12	11	7	7	6	6	6	6	6	10	8	8	6	6	5	4	6	6	6	5	5	5	5	5	6	4
Galer Place (N)	3	3	3	3	4	4	4	5	5	4	4	4	6	6	7	7	7	7	6	6	5	6	7	10	12	16	17	17	16
Naranja Drive (N)	4	5	4	4	4	3	2	2	2	3	3	3	2	2	3	3	3	2	2	2	2	2	2	2	1	1	1	1	1
N Adams St (N)	63	63	61	57	60	59	57	61	60	58	57	58	57	57	58	58	58	60	60	60	58	59	54	56	57	58	59	60	60
Portola Avenue	50	49	48	50	50	46	45	46	42	45	45	43	47	49	47	47	50	52	53	52	51	47	46	45	45	45	47	48	50
E Glenoaks Blvd (W)	6	6	7	7	6	6	6	6	7	6	8	8	9	8	7	7	6	6	6	6	5	6	6	7	7	7	6	7	7
E Doran Street (W)	23	24	25	24	21	22	22	21	23	23	23	21	26	24	22	22	24	22	24	25	24	24	23	23	23	24	25	25	25
N Adams St (S)	58	58	57	56	58	58	58	57	54	63	60	64	60	60	59	64	61	59	63	60	59	62	64	63	66	66	65	64	59
E Doran Street (E)	47	46	47	43	44	43	41	40	40	38	35	37	40	39	42	39	39	41	44	45	49	46	43	47	51	51	52	50	50
Naranja Drive (S)	48	49	45	43	40	41	40	38	39	39	36	37	33	36	38	37	38	41	41	38	40	41	42	43	46	46	47	47	48
Galer Place (S)	13	10	10	9	9	9	12	12	13	13	13	13	13	12	12	12	11	11	11	11	11	11	11	11	12	13	13	13	13
Richard Place	29	28	28	27	28	24	24	24	25	24	27	27	25	25	28	28	31	30	30	33	33	31	32	33	30	30	29	29	31
Grove Place (S)	15	15	16	15	17	17	18	19	22	22	21	21	21	21	22	22	22	21	22	22	21	22	21	20	20	20	21	19	18
Total Occupancy	748	754	750	726	724	684	698	704	707	733	725	720	715	706	711	706	714	716	724	710	678	684	679	691	700	713	718	722	717



**Project Title - Woodrow Wilson Middle School - Glendale, CA**

Parking Occupancy Survey

Location: Woodrow Wilson Middle SchoolDate: Tuesday, October 8th, 2019

Parking Lot	Inv	5:00 PM	5:30 PM	6:00 PM	6:30 PM	7:00 PM	7:30 PM	8:00 PM	8:30 PM	9:00 PM	9:30 PM	10:00 PM
Unmarked Stall	65	33	17	9	15	24	23	9	9	10	4	3
Handicapped	4	1	0	0	0	0	0	0	0	0	0	0
Total Occupancy	69	34	17	9	15	24	23	9	9	10	4	3
Total Percent	-	49%	25%	13%	22%	35%	33%	13%	13%	14%	6%	4%

Street Parking	5:00 PM	5:30 PM	6:00 PM	6:30 PM	7:00 PM	7:30 PM	8:00 PM	8:30 PM	9:00 PM	9:30 PM	10:00 PM
Briarwood Lane	5	5	6	6	7	7	8	7	7	5	4
E Glenoaks Blvd (E)	2	3	3	4	5	6	6	6	8	8	6
E Glenoaks Blvd (C)	40	42	47	53	55	55	54	57	59	59	59
Glenvista Drive (S)	4	3	3	4	4	5	5	5	5	5	4
Glenvista Drive (N)	3	2	3	6	6	7	7	6	7	6	6
Sylvanoak Drive (S)	14	13	13	15	15	16	16	18	18	16	16
Sylvanoak Drive (N)	6	7	9	6	7	7	8	9	9	10	10
N Verdugo Rd	78	75	87	86	93	100	99	100	103	104	110
Verdugo Circle	52	47	46	49	49	51	52	53	58	61	62
N Glendale Avenue	26	30	29	31	27	28	28	29	29	31	30
Monterey Road (W)	2	3	3	3	3	4	4	4	4	4	4
Monterey Road (E)	27	27	28	29	28	26	24	24	27	27	27
Woodbury Road	13	14	15	15	14	14	14	14	14	15	16
Grove Place (N)	6	4	5	6	7	8	8	9	9	7	8
Galer Place (N)	6	4	6	6	10	11	9	11	11	9	9
Naranja Drive (N)	1	3	3	4	4	3	5	5	5	6	5
N Adams St (N)	46	48	53	61	59	62	62	63	63	63	63
Portola Avenue	41	44	45	48	49	50	52	55	58	57	59
E Glenoaks Blvd (W)	5	6	8	5	6	7	7	7	7	8	8
E Doran Street (W)	23	24	22	24	23	24	25	24	25	26	24
N Adams St (S)	53	55	58	61	56	56	59	58	58	58	57
E Doran Street (E)	37	43	49	48	47	53	55	57	60	59	59
Naranja Drive (S)	39	42	44	46	45	47	47	47	48	49	48
Galer Place (S)	6	6	7	7	8	11	11	11	11	13	16
Richard Place	21	22	24	25	26	25	26	28	29	31	33
Grove Place (S)	14	15	14	16	16	13	14	16	18	19	20
Total Occupancy	570	587	630	664	669	696	705	723	750	756	763



## Appendix E. Intersection Turn Movement Volumes and LOS Worksheets, Existing With Project Conditions

## Appendices

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## Wilson Middle School

Vistro File: Y:\...\Nov\_2019\_WilsonMS.vistro

Scenario 7 E+P Weekday PM

Report File: Y:\...\E+P\_PM.pdf

12/4/2019

**Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	SR-134 WB Ramps at Monterey Road	Signalized	ICU 1	NB Right	0.850	-	D
2	Glendale Avenue at SR-134 EB Ramps	Signalized	ICU 1	NEB Thru	0.678	-	B
3	Glendale Avenue at Monterey Road	Signalized	ICU 1	EB Right	0.984	-	E
4	Glendale Avenue at Glenoaks Boulevard	Signalized	ICU 1	NEB Thru	0.758	-	C
5	Adams Street at Monterey Road	Two-way stop	HCM 6th Edition	SB Left	0.065	15.9	C
6	Adams Street at Glenoaks Boulevard	Two-way stop	HCM 6th Edition	SB Left	0.028	15.6	C
7	Verdugo Road at Monterey Road	Signalized	ICU 1	EB Right	0.625	-	B
8	Verdugo Road at Glenoaks Boulevard	Signalized	ICU 1	EB Thru	0.513	-	A





V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

### Intersection Level Of Service Report

#### Intersection 1: SR-134 WB Ramps at Monterey Road

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.850

#### Intersection Setup

Name	SR-134 WB Ramps			Cordova Avenue			Eastbound			Monterey Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

#### Volumes

Name	SR-134 WB Ramps			Cordova Avenue			Eastbound			Monterey Road		
Base Volume Input [veh/h]	345	0	520	0	0	6	0	720	91	602	273	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0000	1.0000	1.0000	1.0000	1.0300	1.0000	1.0300	1.0300	1.0000	1.0300	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	2	0	0	0	0	0	0	0	2	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	355	0	522	0	0	6	0	742	94	602	283	15
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	89	0	131	0	0	2	0	186	24	151	71	4
Total Analysis Volume [veh/h]	355	0	522	0	0	6	0	742	94	602	283	15
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Cycle Length [s]	100
Lost time [s]	10.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	0	2	0	0	6	0	8	0	7	4	0
Auxiliary Signal Groups			2									
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-




**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.22	0.00	0.33	0.00	0.00	0.00	0.00	0.23	0.06	0.19	0.19	0.19
Intersection LOS	D											
Intersection V/C	0.850											

**Intersection Level Of Service Report**  
**Intersection 2: Glendale Avenue at SR-134 EB Ramps**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.678

**Intersection Setup**

Name						
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name						
Base Volume Input [veh/h]	0	1882	1037	504	440	359
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	10	3	1	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1948	1071	520	456	370
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	487	268	130	114	93
Total Analysis Volume [veh/h]	0	1948	1071	520	456	370
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

**Intersection Settings**

Cycle Length [s]	100
Lost time [s]	10.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Overlap	Permissive	Permissive
Signal Group	0	2	6	6	3	0
Auxiliary Signal Groups				6		
Lead / Lag	-	-	-	-	Lead	-

**Movement, Approach, & Intersection Results**





V/C, Movement V/C Ratio	0.00	0.41	0.33	0.33	0.14	0.17
Intersection LOS	B					
Intersection V/C	0.678					

### Intersection Level Of Service Report

#### Intersection 3: Glendale Avenue at Monterey Road

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.882

#### Intersection Setup

Name				Glendale Avenue			Monterey Road			Monterey Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

#### Volumes

Name				Glendale Avenue			Monterey Road			Monterey Road		
Base Volume Input [veh/h]	317	902	118	0	614	327	216	234	766	87	239	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0000	1.0300	1.0000	1.0000	1.0000	1.0300	1.0300	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	13	5	0	0	0	2	0	4	2	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	327	929	135	5	632	327	216	236	789	94	241	22
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	82	232	34	1	158	82	54	59	197	24	60	6
Total Analysis Volume [veh/h]	327	929	135	5	632	327	216	236	789	94	241	22
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		



**Intersection Settings**

Cycle Length [s]	100
Lost time [s]	10.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	5	2	0	0	6	0	0	4	4	0	8	0
Auxiliary Signal Groups									4,5			
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.10	0.33	0.33	0.00	0.13	0.20	0.14	0.15	0.39	0.06	0.08	0.08
Intersection LOS	D											
Intersection V/C	0.882											

**Intersection Level Of Service Report**  
**Intersection 4: Glendale Avenue at Glenoaks Boulevard**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.758

**Intersection Setup**

Name	Glendale Avenue			Glendale Avenue			Glenoaks Blvd			Glenoaks Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left2	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Glendale Avenue			Glendale Avenue			Glenoaks Blvd			Glenoaks Blvd		
Base Volume Input [veh/h]	121	971	65	22	727	172	67	180	14	338	267	128
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0300	1.0000	1.0300	1.0300	1.0300	1.0000	1.0000	1.0300	1.0300	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	2	0	0	3	0	0	0	0	0	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	122	1002	65	23	752	177	67	180	14	348	267	130
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	251	16	6	188	44	17	45	4	87	67	33
Total Analysis Volume [veh/h]	122	1002	65	23	752	177	67	180	14	348	267	130
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Cycle Length [s]	100
Lost time [s]	10.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-

**Movement, Approach, & Intersection Results**




V/C, Movement V/C Ratio	0.08	0.31	0.04	0.01	0.19	0.19	0.04	0.11	0.01	0.22	0.17	0.08
Intersection LOS	C											
Intersection V/C	0.758											

### Intersection Level Of Service Report

#### Intersection 5: Adams Street at Monterey Road

Control Type:	Two-way stop	Delay (sec / veh):	15.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.065

#### Intersection Setup

Name	Adams Street		Monterey Road			
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

#### Volumes

Name	Adams Street		Monterey Road			
Base Volume Input [veh/h]	20	6	24	329	280	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0000	1.0000	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	20	9	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	6	24	359	297	6
Peak Hour Factor	0.9050	0.9050	0.9050	0.9050	0.9050	0.9050
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	2	7	99	82	2
Total Analysis Volume [veh/h]	23	7	27	397	328	7
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**




V/C, Movement V/C Ratio	0.06	0.01	0.02	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	15.87	10.79	8.01	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.24	0.24	0.07	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	6.02	6.02	1.69	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.69		0.51		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.83					
Intersection LOS	C					

### Intersection Level Of Service Report

#### Intersection 6: Adams Street at Glenoaks Boulevard

Control Type:	Two-way stop	Delay (sec / veh):	15.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.028

#### Intersection Setup

Name	Adams Street			Verdugo Circle Drive			Glenoaks Blvd			Glenoaks Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

#### Volumes

Name	Adams Street			Verdugo Circle Drive			Glenoaks Blvd			Glenoaks Boulevard		
Base Volume Input [veh/h]	6	2	10	9	1	12	20	325	18	10	222	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	2	10	9	1	12	20	325	18	10	222	7
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	1	3	2	0	3	5	88	5	3	60	2
Total Analysis Volume [veh/h]	7	2	11	10	1	13	22	353	20	11	241	8
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings**

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

**Movement, Approach, & Intersection Results**




V/C, Movement V/C Ratio	0.02	0.01	0.02	0.03	0.00	0.02	0.02	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	15.53	15.26	10.60	15.59	15.37	9.89	7.78	0.00	0.00	8.07	0.00	0.00
Movement LOS	C	C	B	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.13	0.13	0.13	0.15	0.15	0.15	0.05	0.05	0.05	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	3.24	3.24	3.24	3.74	3.74	3.74	1.27	1.27	1.27	0.70	0.70	0.70
d_A, Approach Delay [s/veh]	12.79			12.50			0.43			0.34		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	1.17											
Intersection LOS	C											

### Intersection Level Of Service Report

#### Intersection 7: Verdugo Road at Monterey Road

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.625

**Intersection Setup**

Name			Verdugo Road			
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name			Verdugo Road			
Base Volume Input [veh/h]	228	602	482	38	25	311
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	0	0	4	2	5
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	245	620	496	43	28	325
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	61	155	124	11	7	81
Total Analysis Volume [veh/h]	245	620	496	43	28	325
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	



**Intersection Settings**

Cycle Length [s]	100
Lost time [s]	10.00

**Phasing & Timing**

Control Type	ProtPerm	Permissive	Permissive	Permissive	Split	Split
Signal Group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.15	0.19	0.17	0.17	0.02	0.20
Intersection LOS	B					
Intersection V/C	0.625					

**Intersection Level Of Service Report**  
**Intersection 8: Verdugo Road at Glenoaks Boulevard**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.513

**Intersection Setup**

Name	Verdugo Road						Glenoaks Boulevard			Glenoaks Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Verdugo Road						Glenoaks Boulevard			Glenoaks Boulevard		
Base Volume Input [veh/h]	86	515	28	60	341	38	56	167	118	31	119	89
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0300	1.0000	1.0300	1.0300	1.0300	1.0300	1.0000	1.0000	1.0000	1.0000	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	1	0	2	0	0	0	0	2	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	86	531	29	62	353	39	58	167	118	33	119	92
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	133	7	16	88	10	15	42	30	8	30	23
Total Analysis Volume [veh/h]	86	531	29	62	353	39	58	167	118	33	119	92
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Cycle Length [s]	100
Lost time [s]	10.00

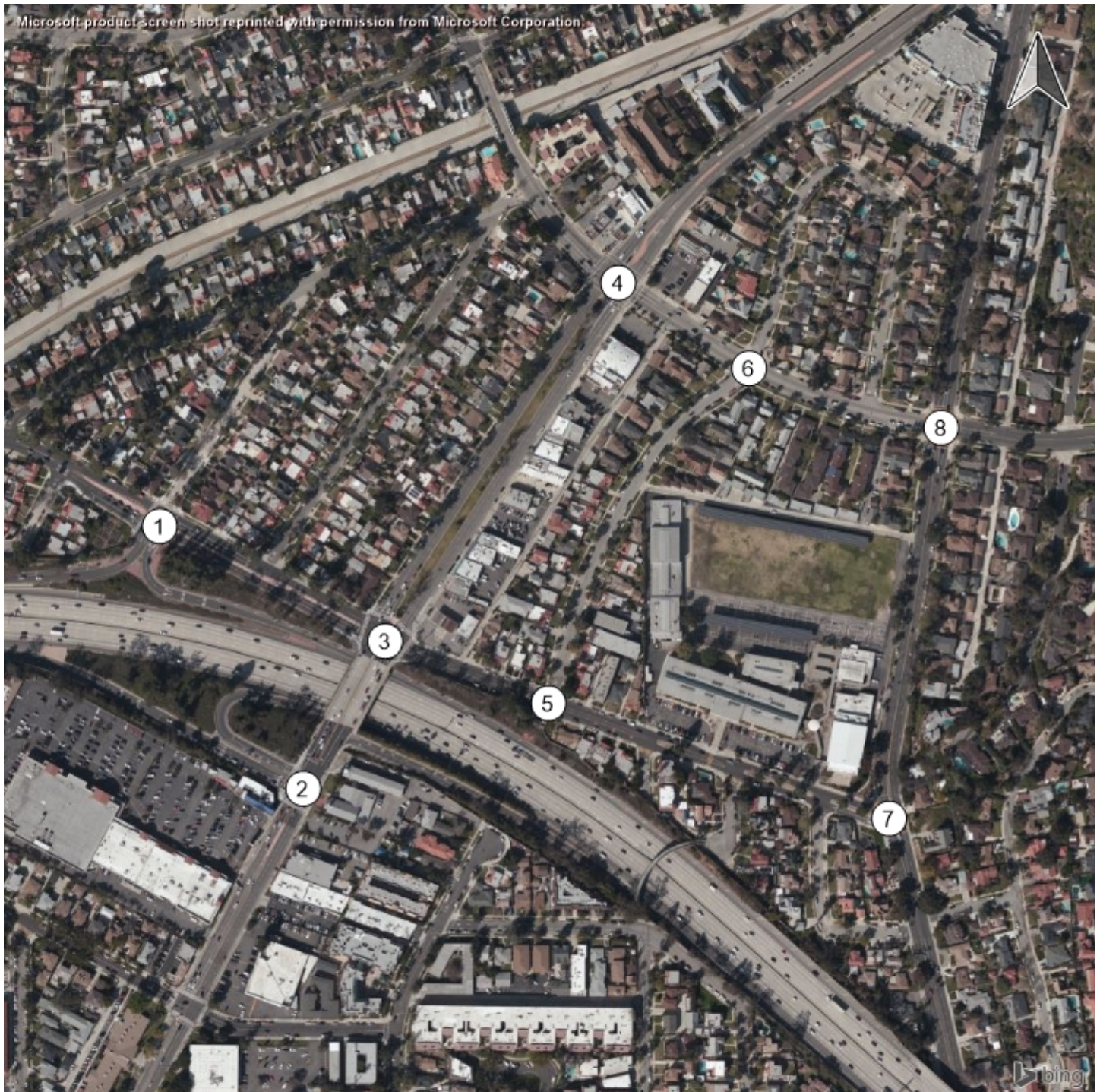
**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-

**Movement, Approach, & Intersection Results**

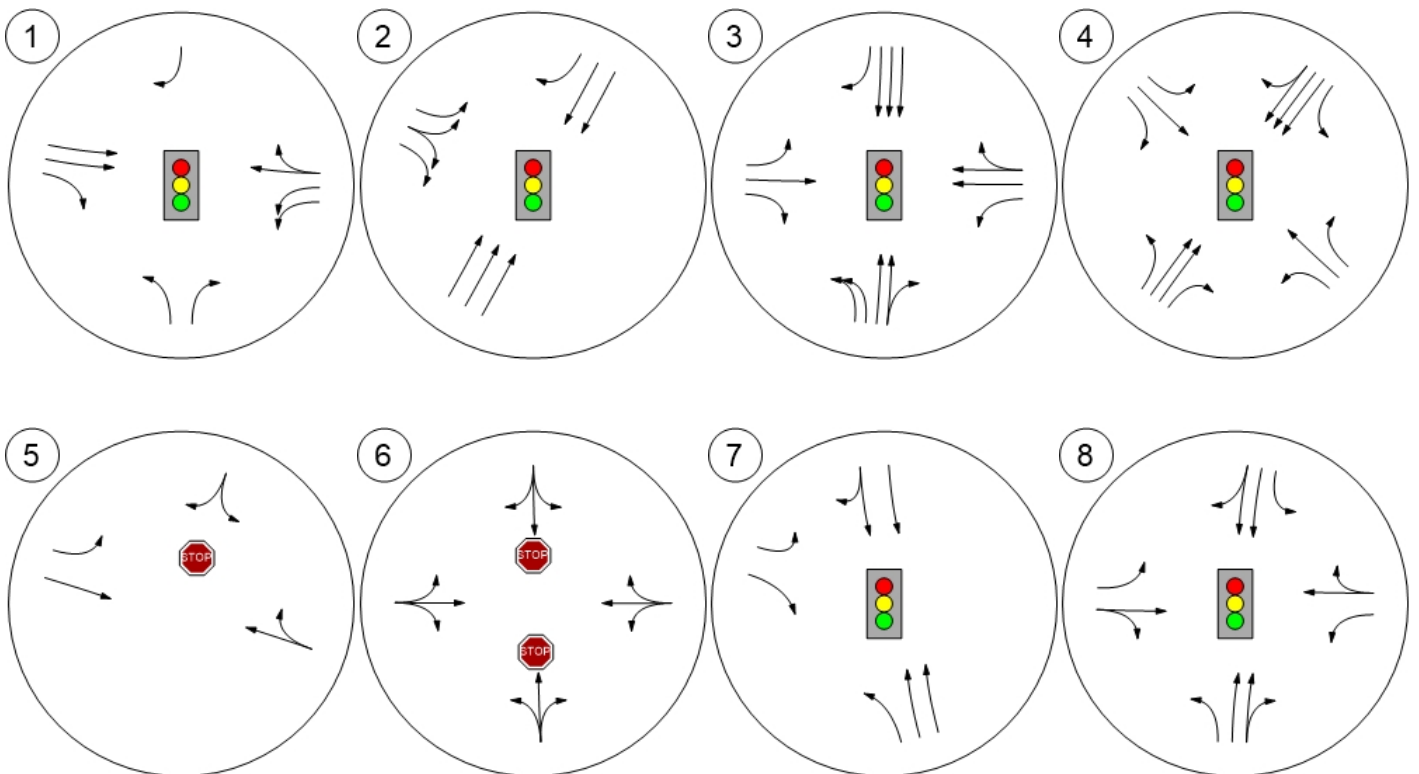
V/C, Movement V/C Ratio	0.05	0.18	0.18	0.04	0.12	0.12	0.04	0.18	0.18	0.02	0.13	0.13
Intersection LOS	A											
Intersection V/C	0.513											

## Study Intersections

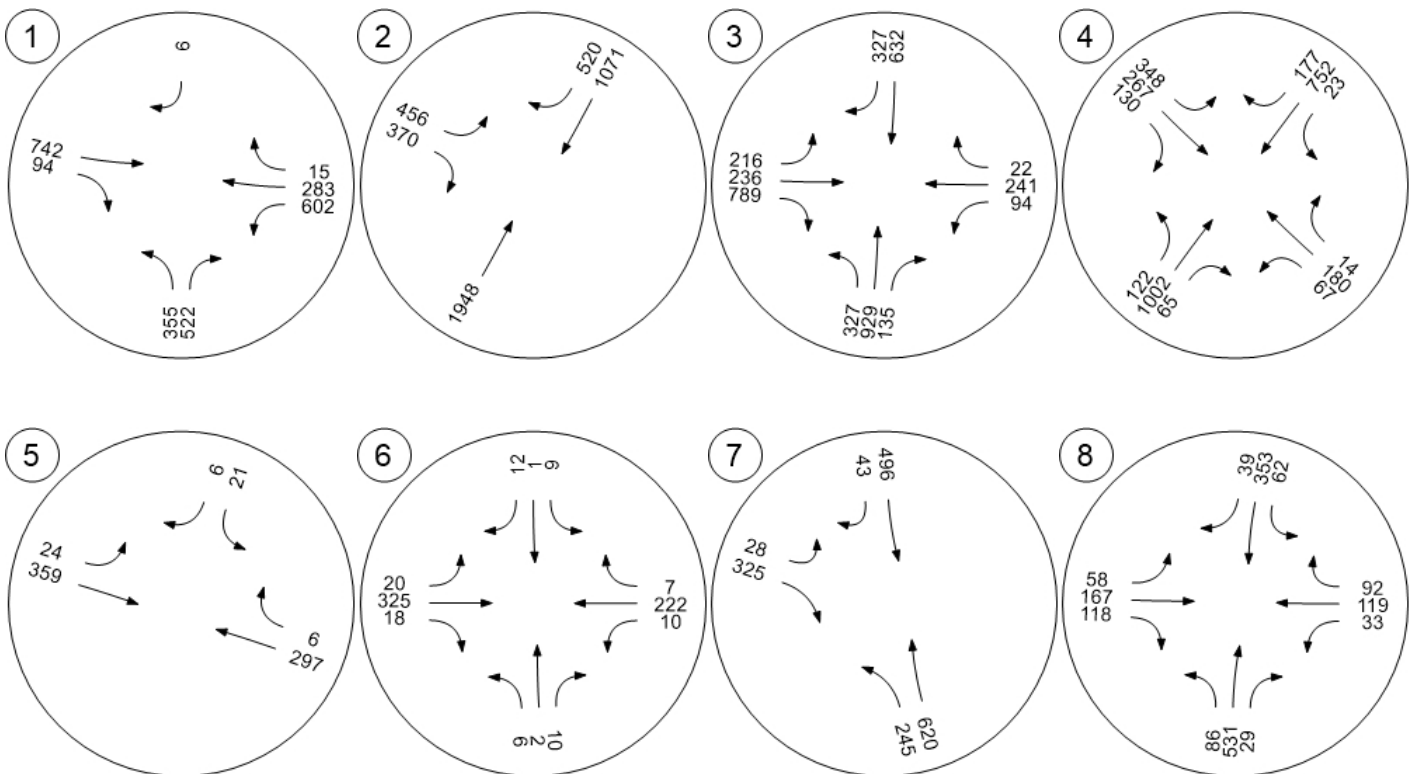




## Lane Configuration and Traffic Control



## Traffic Volume - Future Total Volume



## Appendix F. Cumulative Projects Trip Generation and Volume Development

## Appendices

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## List of Related Projects – November 2019

Project Name	Location	Land Use	Size	Unit	Status
1. Next on Lex	210 W. Lexington and 418 N. Central Ave.	Multi-Family	464	du	Under Construction
		Live/Work	25	du	
		Commercial	8,140	sf	
2. Central + Wilson	130 N. Central Ave.	Multi-Family	153	du	Approved
		Commercial (Option A)	4,900	sf	
		Live/Work (Option B)	5	du	
3. The Link	3901-3915 San Fernando Rd.	Multi-Family	142	du	Under Construction
		Commercial	11,600	sf	
		Studio	5,000	sf	
4. Enclave	525 W. Elk Ave.	Congregate Care	101	beds	Under Construction
5. Mixed-Use Project	507-525 W. Colorado St.	Multi-Family	90	du	Under Construction
		Medical Office	18,000	sf	
		Commercial	1,000	sf	
6. Broadway & Pacific	525 W. Broadway	Multi-Family	176	du	Under Construction
		Live/Work	4	du	
		Commercial	18,200	sf	
7. Orange/Milford Project	413 N. Brand Blvd.	Multi-Family	228	du	Approved
		Commercial	5,000	sf	
8.	1407 W. Glenoaks Blvd.	Multi-Family	55	du	Under Construction
9. Holiday Inn Suites	1001 E. Colorado St.	Hotel	134	rm	Under Construction
10. Aloft Hotel	1100-1108 N. Brand Blvd.	Hotel	85	rm	Under Construction
11.	2612 Honolulu Ave.	Multi-Family	28	du	Approved
12.	429-503 N. Kenwood St.	Multi-Family	21	du	Approved

Project Name	Location	Land Use	Size	Unit	Status
13.	500 E. Colorado St.	Medical Office	30,800	sf	Under Construction
		Retail	8,230	sf	
14.	126-132 S. Kenwood St.	Multi-Family	44	du	Proposed
15.	800 W. Doran St.	Multi-Family	52	du	Proposed
16.	1838 S. Brand Blvd.	Multi-Family	80	du	Under Construction
17.	1815-1821 S. Brand Blvd.	Multi-Family	38	du	Approved
		Commercial/Office	950	sf	
18.	4201 Pennsylvania Ave.	Multi-Family	30	du	Under Construction
19. Hotel Louise	145 N. Louise St.	Hotel	147	rm	Under Construction
20. AC Hotel	120 W. Colorado	Hotel	131	rm	Approved
21.	1820 S. Brand Blvd.	Live/Work	28	du	Approved
22.	352-358 W. Milford St.	Affordable Multi-Family	32	du	Under Construction
23. Meta Housing	1412-1422 5 <sup>th</sup> St. & 1116 Sonora Ave.	Affordable Senior	66	du	Under Construction
24.	610 N. Brand Blvd.	Multi-family	240	du	Proposed
25.	601-611 N. Brand Blvd.	Hotel	857	rm	Proposed
		Commercial	7,500	sf	
26.	401-409 Hawthorne St.	Multi-family	23	du	Proposed
27.	206 W. Chevy Chase	Medical Office	21,124	sf	Approved
28.	129 W. Los Feliz	Congregate care facility	80	rms	Proposed
29.	361 Myrtle St.	Condominium	15	du	Proposed
30. Affordable Housing	452 W. Milford	Multi-Family	15	du	Approved
31.	130 W. Eulalia	Medical Office	4,074	sf	Proposed
32.	534 N. Kenwood St.	Multi-Family	11	du	Proposed
33.	350 Salem St.	Condominium	12	du	Approved
34.	532 W. Elk Ave.	Condominium	6	du	Approved

Project Name	Location	Land Use	Size	Unit	Status
35.	712 S. Louise St.	Multi-Family	10	du	Approved
36.	611 E. Acacia Ave.	Multi-Family	14	du	Proposed
37.	722 E. Acacia Ave.	Multi-Family	14	du	Approved
38.	913 S. Adams St.	Multi-Family	18	du	Approved
39.	1017 San Rafael Ave.	Condominium	5	du	Under Construction
40.	1058 Ruberta Ave.	Congregate Care Facility	5,533	sf	Under Construction
41.	373 W. Doran St.	Multi-Family	5	du	Under Construction
42.	700 E. Lomita Ave.	Multi-Family	6	du	Under Construction
43.	463 Salem St.	Multi-Family	10	du	Under Construction
44.	344 W. Milford St.	Multi-Family	6	du	Under Construction
45.	512 W. Doran St.	Multi-Family	4	du	Approved
46.	400 W. Colorado St.	Medical Office	2,239	sf	Under Construction
		General Office	4,697	sf	
47.	337 N. Cedar St.	Multi-Family	4	du	Approved
48.	708 E. Palmer	Multi-Family	2	du	Under Construction
49.	115 N. Adams St.	Multi-Family	4	du	Under Construction
50.	518-520 E. Windsor	Multi-Family	34	du	Under Construction
51.	600 W. Wilson Ave.	Multi-Family	3	du	Under Construction
52.	518 Glenwood Rd.	Multi-Family	6	du	Under Construction
53. Affordable Housing	238 Concord St.	Multi-Family	13	du	Proposed
54. 604-610 W. Broadway		Medical Office Retail	1,394	sf	
55. 520 N. Central		Multi-Family	99	du	Approved
56. Armenian American Museum	151 E. Colorado - Central Park	Museum	59,800	sf	Approved
57. 2817 Montrose Ave.		Multi-Family	38	du	Proposed

Project Name	Location	Land Use	Size	Unit	Status
58.	340 N. Central Ave.	General Office	14,229	sf	Proposed
59.	515-523 N. Central Ave.	Hotel	142	rms	Proposed
60. Affordable Housing	3950 Foothill Blvd.	Multi-Family	34	du	Proposed
		General Office	1,000	sf	
		Retail	2,473	sf	
		Restaurant	1,000	sf	
61. Affordable Housing	2941 Honolulu Ave.	Multi-Family	18	du	Proposed
62. 1260 S. Brand Blvd.		Addition to Existing Auto Dealership	9,950	sf	Proposed
63. 423 Oak St.		Multi-Family	18	du	Proposed
64. 1809 Verdugo Rd.		Residential congregate living, medical facility	79	bed	Proposed
65. 135 W. Glenoaks Blvd.		Hotel	219	rms	Proposed

Source: City of Glendale, November 2019

du = dwelling units; s f = square feet; rm = rooms

Cumulative Projects Trip Generation													
Group	Project Number	Project Name/ Address	Land Use	ITE Code	Size	Unit	Trip Generation <sup>1</sup>						
							Daily	AM Peak Hour			PM Peak Hour		
								In	Out	Total	In	Out	Total
A	9	Holiday Inn Suites - 1001 E. Colorado St.	Hotel	310	134	rms	1120	37	26	63	41	39	80
	47	337 N. Cedar St	Residential	220	4	du	29	0	1	1	1	1	2
	49	115 N. Adams St.	Residential	220	4	du	29	0	1	1	1	1	2
							<b>1178</b>	<b>37</b>	<b>28</b>	<b>65</b>	<b>43</b>	<b>41</b>	<b>84</b>
B			Residential	220	228	du	1669	24	81	105	80	47	127
	7	413 N. Brand Blvd.	Commercial	820	5000	sf	189	3	2	5	9	10	19
	12	429-503 N. Kenwood St.	Residential	220	12	du	88	1	4	5	4	2	6
	24	610 N. Brand Blvd	Residential	220	240	du	1757	25	85	110	85	50	135
	32	534 N. Kenwood St.	Residential	220	11	du	81	1	4	5	4	2	6
							<b>3784</b>	<b>54</b>	<b>176</b>	<b>230</b>	<b>182</b>	<b>111</b>	<b>293</b>
C			Residential	220	489	du	3543	51	171	222	171	100	271
	1	Next on Lex - 210 W. Lexington and 418 N. Central Ave	Commerical	820	8140	sf	307	5	3	8	15	16	31
			Residential	220	158	du	1157	17	56	73	56	33	89
	2	Central + Wilson - 130 N. Central Ave	Commercial	820	4900	sf	189	3	2	5	9	10	19
	22	352-358 W. Milford St	Residential	220	32	du	234	3	11	14	11	7	18
	29	361 Myrtle St	Residential	220	15	du	110	2	5	7	5	3	8
	30	452 W. Milford	Residential	220	15	du	110	2	5	7	5	3	8
	33	350 Salem St	Residential	220	30	du	88	1	4	5	4	2	6
	55	520 N. Central	Residential	220	99	du	725	10	35	45	35	21	56
	59	515-523 N. Central Ave	Hotel	310	142	rms	1176	39	27	66	41	39	80
							<b>7639</b>	<b>133</b>	<b>319</b>	<b>452</b>	<b>352</b>	<b>234</b>	<b>586</b>
D	10	Aloft Hotel - 1100-1108 N. Brand Blvd.	Hotel	310	85	rms	711	24	16	40	26	25	51
	65	135-190 W. Glenoaks Blvd	Hotel	310	219	rms	1831	61	42	103	67	64	131
							<b>2542</b>	<b>85</b>	<b>58</b>	<b>143</b>	<b>93</b>	<b>89</b>	<b>182</b>
E	64	1809 Verdugo Rd.	Assisted Living	254	79	beds	205	9	6	15	8	13	21
							<b>205</b>	<b>9</b>	<b>6</b>	<b>15</b>	<b>8</b>	<b>13</b>	<b>21</b>
F			Medical Office	720	30800	sf	1072	67	19	86	30	77	107
	13	500 E. Colorado St.	Commercial	820	8,230	sf	311	5	3	8	15	16	31
	14	126-132 S. Kenwood St.	Residential	220	44	du	322	5	16	21	16	9	25
	19	Hotel Louise - 145 N. Louise St.	Hotel	310	147	rms	1233	40	28	68	43	41	84
							<b>2938</b>	<b>117</b>	<b>66</b>	<b>183</b>	<b>104</b>	<b>143</b>	<b>247</b>
		<b>Total</b>					<b>36572</b>	<b>435</b>	<b>653</b>	<b>1,088</b>	<b>782</b>	<b>632</b>	<b>1,414</b>

**BOLD** = Total

## Appendix G. Intersection Turn Movement Volumes and LOS Worksheets, Opening Year Without Project Conditions

## Appendices

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## Wilson Middle School

Vistro File: Y:\...\Nov\_2019\_WilsonMS.vistro

Scenario 3 3 2021 NP Weekday PM

Report File: Y:\...\OY\_NP\_PM.pdf

12/4/2019

**Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	SR-134 WB Ramps at Monterey Road	Signalized	ICU 1	NB Right	0.884	-	D
2	Glendale Avenue at SR-134 EB Ramps	Signalized	ICU 1	NEB Thru	0.689	-	B
3	Glendale Avenue at Monterey Road	Signalized	ICU 1	EB Right	1.006	-	F
4	Glendale Avenue at Glenoaks Boulevard	Signalized	ICU 1	NEB Thru	0.775	-	C
5	Adams Street at Monterey Road	Two-way stop	HCM 6th Edition	SB Left	0.065	15.9	C
6	Adams Street at Glenoaks Boulevard	Two-way stop	HCM 6th Edition	SB Left	0.029	15.8	C
7	Verdugo Road at Monterey Road	Signalized	ICU 1	EB Right	0.615	-	B
8	Verdugo Road at Glenoaks Boulevard	Signalized	ICU 1	EB Thru	0.516	-	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.







### Intersection Level Of Service Report

#### Intersection 1: SR-134 WB Ramps at Monterey Road

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.884

#### Intersection Setup

Name	SR-134 WB Ramps			Cordova Avenue			Eastbound			Monterey Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

#### Volumes

Name	SR-134 WB Ramps			Cordova Avenue			Eastbound			Monterey Road		
Base Volume Input [veh/h]	345	0	520	0	0	6	0	720	91	602	273	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0000	1.0200	1.0000	1.0000	1.0300	1.0000	1.0300	1.0300	1.0200	1.0300	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	24	0	0	0	0	28	0	6	43	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	355	0	554	0	0	6	0	770	94	620	324	15
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	89	0	139	0	0	2	0	193	24	155	81	4
Total Analysis Volume [veh/h]	355	0	554	0	0	6	0	770	94	620	324	15
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Cycle Length [s]	100
Lost time [s]	10.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	0	2	0	0	6	0	8	0	7	4	0
Auxiliary Signal Groups			2									
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-




**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.22	0.00	0.35	0.00	0.00	0.00	0.00	0.24	0.06	0.19	0.21	0.21
Intersection LOS	D											
Intersection V/C	0.884											

**Intersection Level Of Service Report**  
**Intersection 2: Glendale Avenue at SR-134 EB Ramps**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.689

**Intersection Setup**

Name						
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name						
Base Volume Input [veh/h]	0	1882	1037	504	440	359
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	62	53	0	0	6
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	2000	1121	519	453	376
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	500	280	130	113	94
Total Analysis Volume [veh/h]	0	2000	1121	519	453	376
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

**Intersection Settings**

Cycle Length [s]	100
Lost time [s]	10.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Overlap	Permissive	Permissive
Signal Group	0	2	6	6	3	0
Auxiliary Signal Groups				6		
Lead / Lag	-	-	-	-	Lead	-

**Movement, Approach, & Intersection Results**





V/C, Movement V/C Ratio	0.00	0.42	0.35	0.32	0.14	0.17
Intersection LOS	B					
Intersection V/C	0.689					

### Intersection Level Of Service Report

#### Intersection 3: Glendale Avenue at Monterey Road

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.902

#### Intersection Setup

Name				Glendale Avenue			Monterey Road			Monterey Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

#### Volumes

Name				Glendale Avenue			Monterey Road			Monterey Road		
Base Volume Input [veh/h]	317	902	118	0	614	327	216	234	766	87	239	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0000	1.0300	1.0200	1.0200	1.0200	1.0300	1.0300	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	36	3	0	27	28	19	9	24	2	15	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	333	965	125	0	659	362	239	248	813	92	259	19
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	83	241	31	0	165	91	60	62	203	23	65	5
Total Analysis Volume [veh/h]	333	965	125	0	659	362	239	248	813	92	259	19
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Cycle Length [s]	100
Lost time [s]	10.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	5	2	0	0	6	0	0	4	4	0	8	0
Auxiliary Signal Groups									4,5			
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-

**Movement, Approach, & Intersection Results**





V/C, Movement V/C Ratio	0.10	0.34	0.34	0.00	0.14	0.23	0.15	0.16	0.40	0.06	0.09	0.09
Intersection LOS	E											
Intersection V/C	0.902											

### Intersection Level Of Service Report

#### Intersection 4: Glendale Avenue at Glenoaks Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.775

#### Intersection Setup

Name	Glendale Avenue			Glendale Avenue			Glenoaks Blvd			Glenoaks Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left2	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

#### Volumes

Name	Glendale Avenue			Glendale Avenue			Glenoaks Blvd			Glenoaks Blvd		
Base Volume Input [veh/h]	121	971	65	22	727	172	67	180	14	338	267	128
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0200	1.0300	1.0200	1.0300	1.0300	1.0300	1.0200	1.0200	1.0300	1.0300	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	51	0	0	52	0	0	0	0	0	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	127	1051	66	23	801	177	68	184	14	348	272	134
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	263	17	6	200	44	17	46	4	87	68	34
Total Analysis Volume [veh/h]	127	1051	66	23	801	177	68	184	14	348	272	134
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Cycle Length [s]	100
Lost time [s]	10.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.08	0.33	0.04	0.01	0.20	0.20	0.04	0.12	0.01	0.22	0.17	0.08
Intersection LOS	C											
Intersection V/C	0.775											






### Intersection Level Of Service Report

#### Intersection 5: Adams Street at Monterey Road

Control Type:	Two-way stop	Delay (sec / veh):	15.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.065

#### Intersection Setup

Name	Adams Street		Monterey Road			
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

#### Volumes

Name	Adams Street		Monterey Road			
Base Volume Input [veh/h]	20	6	24	329	280	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0200	1.0200	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	12	17	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	6	24	351	305	6
Peak Hour Factor	0.9050	0.9050	0.9050	0.9050	0.9050	0.9050
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	2	7	97	84	2
Total Analysis Volume [veh/h]	23	7	27	388	337	7
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**





V/C, Movement V/C Ratio	0.06	0.01	0.02	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	15.88	10.85	8.03	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.24	0.24	0.07	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	6.04	6.04	1.70	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.71		0.52		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.83					
Intersection LOS	C					

### Intersection Level Of Service Report

#### Intersection 6: Adams Street at Glenoaks Boulevard

Control Type:	Two-way stop	Delay (sec / veh):	15.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.029

#### Intersection Setup

Name	Adams Street			Verdugo Circle Drive			Glenoaks Blvd			Glenoaks Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

#### Volumes

Name	Adams Street			Verdugo Circle Drive			Glenoaks Blvd			Glenoaks Boulevard		
Base Volume Input [veh/h]	6	2	10	9	1	12	20	325	18	10	222	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	2	10	9	1	12	20	332	18	10	226	7
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	1	3	2	0	3	5	90	5	3	61	2
Total Analysis Volume [veh/h]	7	2	11	10	1	13	22	361	20	11	246	8
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings**

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

**Movement, Approach, & Intersection Results**




V/C, Movement V/C Ratio	0.02	0.01	0.02	0.03	0.00	0.02	0.02	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	15.76	15.45	10.67	15.82	15.56	9.93	7.79	0.00	0.00	8.09	0.00	0.00
Movement LOS	C	C	B	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.13	0.13	0.13	0.15	0.15	0.15	0.05	0.05	0.05	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	3.30	3.30	3.30	3.80	3.80	3.80	1.28	1.28	1.28	0.71	0.71	0.71
d_A, Approach Delay [s/veh]	12.93			12.62			0.43			0.34		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	1.15											
Intersection LOS	C											

### Intersection Level Of Service Report

#### Intersection 7: Verdugo Road at Monterey Road

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.615

#### Intersection Setup

Name	Verdugo Road					
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

#### Volumes

Name	Verdugo Road					
Base Volume Input [veh/h]	228	602	482	38	25	311
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	2	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	235	622	498	39	26	320
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	59	156	125	10	7	80
Total Analysis Volume [veh/h]	235	622	498	39	26	320
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

**Intersection Settings**

Cycle Length [s]	100
Lost time [s]	10.00

**Phasing & Timing**

Control Type	ProtPerm	Permissive	Permissive	Permissive	Split	Split
Signal Group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-

**Movement, Approach, & Intersection Results**





V/C, Movement V/C Ratio	0.15	0.19	0.17	0.17	0.02	0.20
Intersection LOS	B					
Intersection V/C	0.615					

### Intersection Level Of Service Report

#### Intersection 8: Verdugo Road at Glenoaks Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.516

#### Intersection Setup

Name	Verdugo Road						Glenoaks Boulevard			Glenoaks Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

#### Volumes

Name	Verdugo Road						Glenoaks Boulevard			Glenoaks Boulevard		
Base Volume Input [veh/h]	86	515	28	60	341	38	56	167	118	31	119	89
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0200	1.0300	1.0200	1.0300	1.0300	1.0300	1.0300	1.0200	1.0200	1.0200	1.0200	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	0	1	2	0	0	0	0	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	88	532	29	63	353	39	58	170	120	32	121	93
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	133	7	16	88	10	15	43	30	8	30	23
Total Analysis Volume [veh/h]	88	532	29	63	353	39	58	170	120	32	121	93
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Cycle Length [s]	100
Lost time [s]	10.00

**Phasing & Timing**

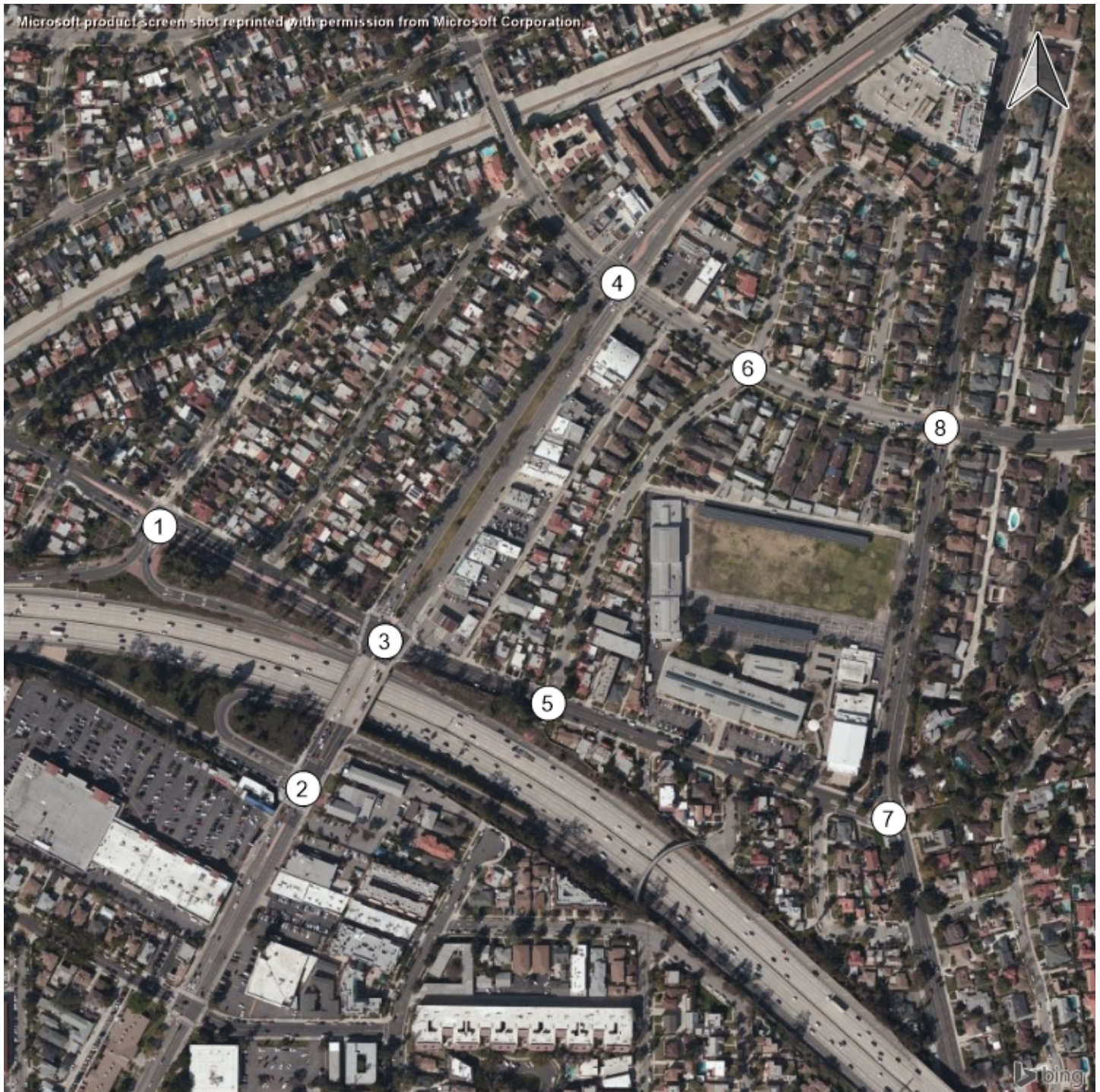
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.06	0.18	0.18	0.04	0.12	0.12	0.04	0.18	0.18	0.02	0.13	0.13
Intersection LOS	A											
Intersection V/C	0.516											

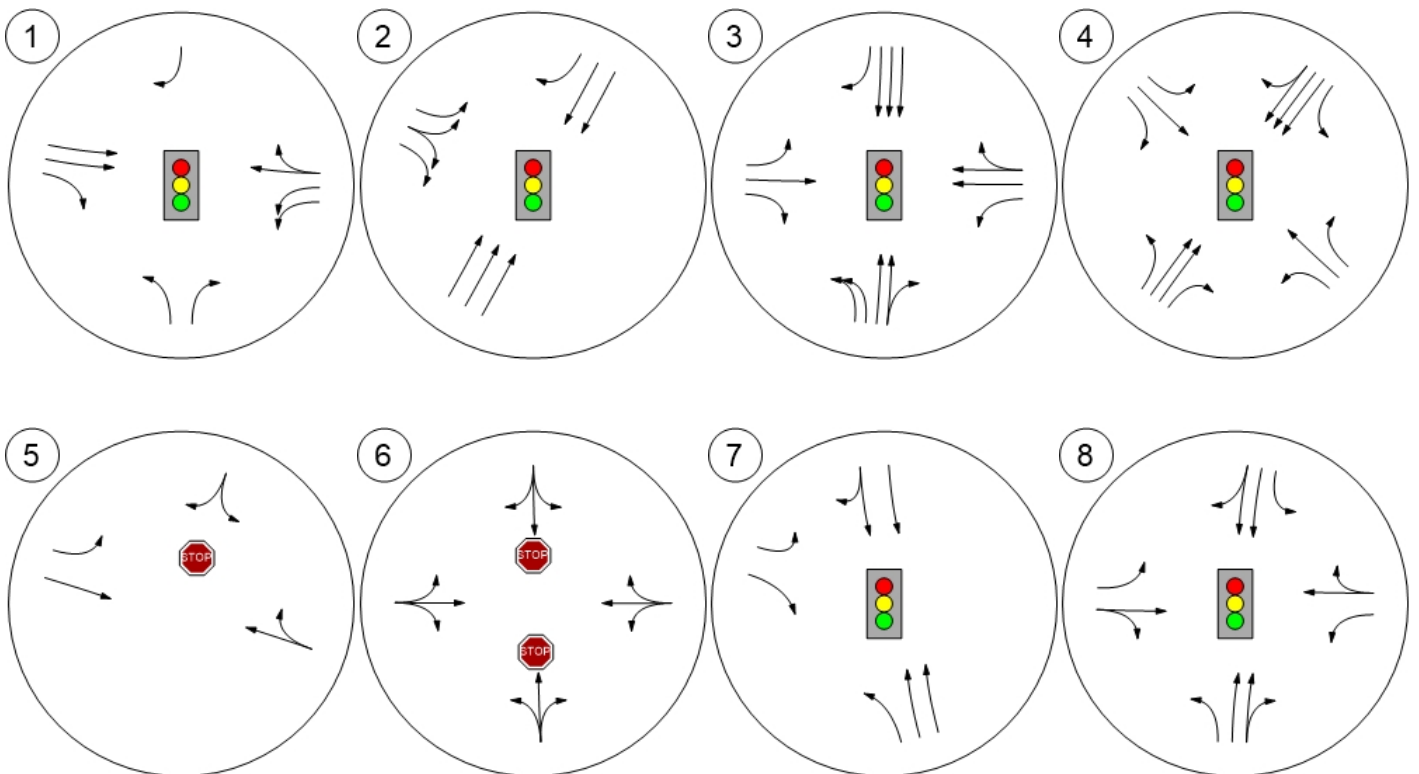


## Study Intersections

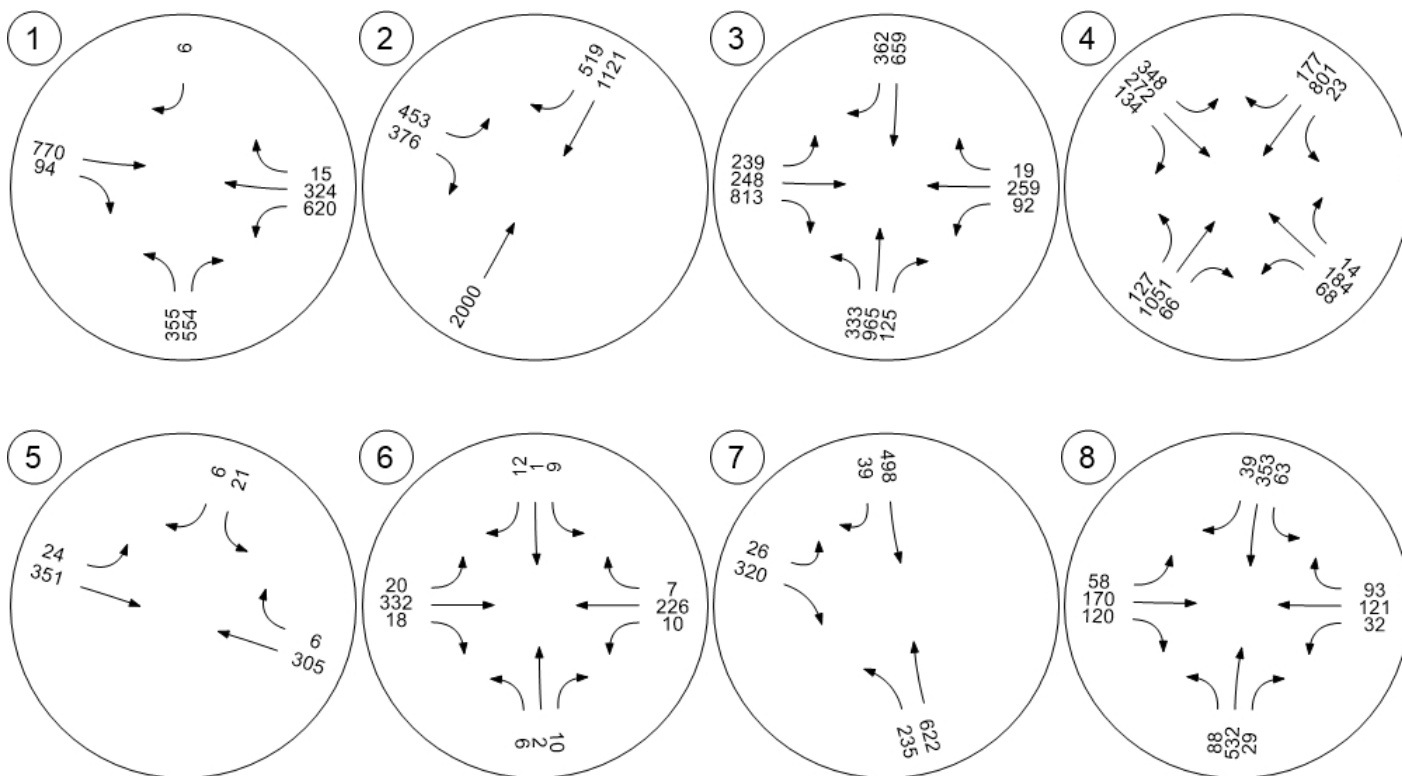
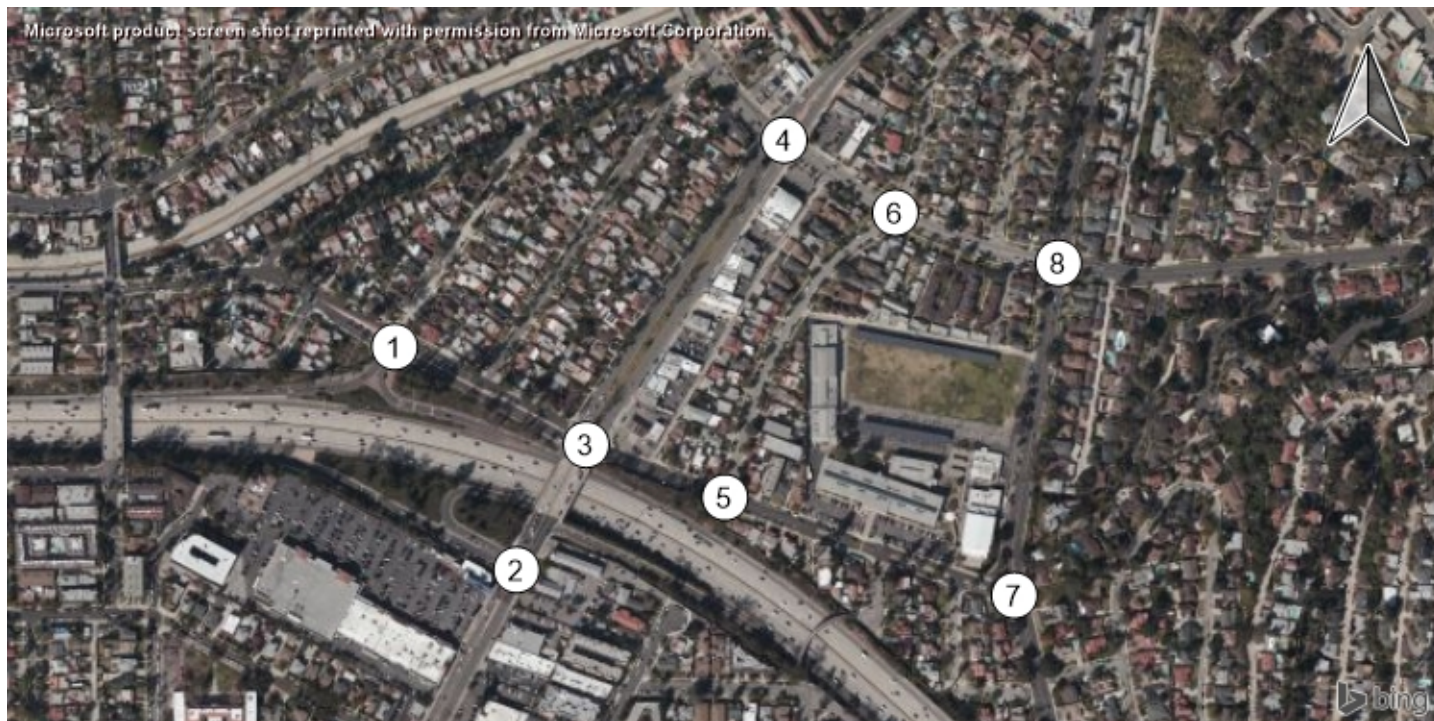




## Lane Configuration and Traffic Control



## Traffic Volume - Future Total Volume



## Appendix H. Intersection Turn Movement Volumes and LOS Worksheets, Opening Year With Project Conditions

## Appendices

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## Wilson Middle School

Vistro File: Y:\...\Nov\_2019\_WilsonMS.vistro

Scenario 5 5 2021 WP Weekday PM

Report File: Y:\...\OY\_WP\_PM.pdf

12/4/2019

**Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	SR-134 WB Ramps at Monterey Road	Signalized	ICU 1	NB Right	0.886	-	D
2	Glendale Avenue at SR-134 EB Ramps	Signalized	ICU 1	NEB Thru	0.692	-	B
3	Glendale Avenue at Monterey Road	Signalized	ICU 1	EB Right	1.013	-	F
4	Glendale Avenue at Glenoaks Boulevard	Signalized	ICU 1	NEB Thru	0.776	-	C
5	Adams Street at Monterey Road	Two-way stop	HCM 6th Edition	SB Left	0.068	16.4	C
6	Adams Street at Glenoaks Boulevard	Two-way stop	HCM 6th Edition	SB Left	0.029	15.8	C
7	Verdugo Road at Monterey Road	Signalized	ICU 1	EB Right	0.625	-	B
8	Verdugo Road at Glenoaks Boulevard	Signalized	ICU 1	EB Thru	0.518	-	A





V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.



**Intersection Level Of Service Report**  
**Intersection 1: SR-134 WB Ramps at Monterey Road**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.886

**Intersection Setup**

Name	SR-134 WB Ramps			Cordova Avenue			Eastbound			Monterey Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	SR-134 WB Ramps			Cordova Avenue			Eastbound			Monterey Road		
Base Volume Input [veh/h]	345	0	520	0	0	6	0	720	91	602	273	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0000	1.0200	1.0000	1.0000	1.0300	1.0000	1.0300	1.0300	1.0200	1.0300	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	26	0	0	0	0	28	0	6	45	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	355	0	556	0	0	6	0	770	94	620	326	15
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	89	0	139	0	0	2	0	193	24	155	82	4
Total Analysis Volume [veh/h]	355	0	556	0	0	6	0	770	94	620	326	15
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Cycle Length [s]	100
Lost time [s]	10.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	0	2	0	0	6	0	8	0	7	4	0
Auxiliary Signal Groups			2									
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.22	0.00	0.35	0.00	0.00	0.00	0.00	0.24	0.06	0.19	0.21	0.21
Intersection LOS	D											
Intersection V/C	0.886											



**Intersection Level Of Service Report**  
**Intersection 2: Glendale Avenue at SR-134 EB Ramps**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.692

**Intersection Setup**

Name						
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name						
Base Volume Input [veh/h]	0	1882	1037	504	440	359
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	72	56	1	3	6
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	2010	1124	520	456	376
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	503	281	130	114	94
Total Analysis Volume [veh/h]	0	2010	1124	520	456	376
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

**Intersection Settings**

Cycle Length [s]	100
Lost time [s]	10.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Overlap	Permissive	Permissive
Signal Group	0	2	6	6	3	0
Auxiliary Signal Groups				6		
Lead / Lag	-	-	-	-	Lead	-





**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.42	0.35	0.33	0.14	0.17
Intersection LOS	B					
Intersection V/C	0.692					

**Intersection Level Of Service Report**  
**Intersection 3: Glendale Avenue at Monterey Road**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.909

**Intersection Setup**

Name				Glendale Avenue			Monterey Road			Monterey Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name				Glendale Avenue			Monterey Road			Monterey Road		
Base Volume Input [veh/h]	317	902	118	0	614	327	216	234	766	87	239	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0000	1.0300	1.0200	1.0200	1.0200	1.0300	1.0300	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	36	16	5	27	28	19	11	24	6	17	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	333	965	138	5	659	362	239	250	813	96	261	22
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	83	241	35	1	165	91	60	63	203	24	65	6
Total Analysis Volume [veh/h]	333	965	138	5	659	362	239	250	813	96	261	22
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Cycle Length [s]	100
Lost time [s]	10.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	5	2	0	0	6	0	0	4	4	0	8	0
Auxiliary Signal Groups									4,5			
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-

**Movement, Approach, & Intersection Results**





V/C, Movement V/C Ratio	0.10	0.34	0.34	0.00	0.14	0.23	0.15	0.16	0.40	0.06	0.09	0.09
Intersection LOS	E											
Intersection V/C	0.909											

### Intersection Level Of Service Report

#### Intersection 4: Glendale Avenue at Glenoaks Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.776

#### Intersection Setup

Name	Glendale Avenue			Glendale Avenue			Glenoaks Blvd			Glenoaks Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left2	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

#### Volumes

Name	Glendale Avenue			Glendale Avenue			Glenoaks Blvd			Glenoaks Blvd		
Base Volume Input [veh/h]	121	971	65	22	727	172	67	180	14	338	267	128
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0200	1.0300	1.0200	1.0300	1.0300	1.0300	1.0200	1.0200	1.0300	1.0300	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	53	0	0	55	0	0	0	0	0	0	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	128	1053	66	23	804	177	68	184	14	348	272	136
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	263	17	6	201	44	17	46	4	87	68	34
Total Analysis Volume [veh/h]	128	1053	66	23	804	177	68	184	14	348	272	136
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Cycle Length [s]	100
Lost time [s]	10.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-

**Movement, Approach, & Intersection Results**




V/C, Movement V/C Ratio	0.08	0.33	0.04	0.01	0.20	0.20	0.04	0.12	0.01	0.22	0.17	0.09
Intersection LOS	C											
Intersection V/C	0.776											

### Intersection Level Of Service Report

#### Intersection 5: Adams Street at Monterey Road

Control Type:	Two-way stop	Delay (sec / veh):	16.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.068

#### Intersection Setup

Name	Adams Street		Monterey Road			
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

#### Volumes

Name	Adams Street		Monterey Road			
Base Volume Input [veh/h]	20	6	24	329	280	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0200	1.0200	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	32	26	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	6	24	371	314	6
Peak Hour Factor	0.9050	0.9050	0.9050	0.9050	0.9050	0.9050
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	2	7	102	87	2
Total Analysis Volume [veh/h]	23	7	27	410	347	7
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.07	0.01	0.02	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	16.39	10.98	8.06	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.25	0.25	0.07	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	6.30	6.30	1.72	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	15.13		0.50		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.82					
Intersection LOS	C					







### Intersection Level Of Service Report

#### Intersection 6: Adams Street at Glenoaks Boulevard

Control Type:	Two-way stop	Delay (sec / veh):	15.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.029

#### Intersection Setup

Name	Adams Street			Verdugo Circle Drive			Glenoaks Blvd			Glenoaks Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

#### Volumes

Name	Adams Street			Verdugo Circle Drive			Glenoaks Blvd			Glenoaks Boulevard		
Base Volume Input [veh/h]	6	2	10	9	1	12	20	325	18	10	222	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	2	10	9	1	12	20	332	18	10	226	7
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	1	3	2	0	3	5	90	5	3	61	2
Total Analysis Volume [veh/h]	7	2	11	10	1	13	22	361	20	11	246	8
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings**

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.02	0.01	0.02	0.03	0.00	0.02	0.02	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	15.76	15.45	10.67	15.82	15.56	9.93	7.79	0.00	0.00	8.09	0.00	0.00
Movement LOS	C	C	B	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.13	0.13	0.13	0.15	0.15	0.15	0.05	0.05	0.05	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	3.30	3.30	3.30	3.80	3.80	3.80	1.28	1.28	1.28	0.71	0.71	0.71
d_A, Approach Delay [s/veh]	12.93			12.62			0.43			0.34		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	1.15											
Intersection LOS	C											

### Intersection Level Of Service Report

#### Intersection 7: Verdugo Road at Monterey Road

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.625

#### Intersection Setup

Name			Verdugo Road			
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

#### Volumes

Name			Verdugo Road			
Base Volume Input [veh/h]	228	602	482	38	25	311
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	2	2	4	2	5
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	245	622	498	43	28	325
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	61	156	125	11	7	81
Total Analysis Volume [veh/h]	245	622	498	43	28	325
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

**Intersection Settings**

Cycle Length [s]	100
Lost time [s]	10.00

**Phasing & Timing**

Control Type	ProtPerm	Permissive	Permissive	Permissive	Split	Split
Signal Group	5	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.15	0.19	0.17	0.17	0.02	0.20
Intersection LOS	B					
Intersection V/C	0.625					

### Intersection Level Of Service Report

#### Intersection 8: Verdugo Road at Glenoaks Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.518

#### Intersection Setup

Name	Verdugo Road						Glenoaks Boulevard			Glenoaks Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

#### Volumes

Name	Verdugo Road						Glenoaks Boulevard			Glenoaks Boulevard		
Base Volume Input [veh/h]	86	515	28	60	341	38	56	167	118	31	119	89
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0200	1.0300	1.0200	1.0300	1.0300	1.0300	1.0300	1.0200	1.0200	1.0200	1.0200	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	1	1	4	0	0	0	0	2	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	88	533	30	63	355	39	58	170	120	34	121	93
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	133	8	16	89	10	15	43	30	9	30	23
Total Analysis Volume [veh/h]	88	533	30	63	355	39	58	170	120	34	121	93
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Cycle Length [s]	100
Lost time [s]	10.00

**Phasing & Timing**

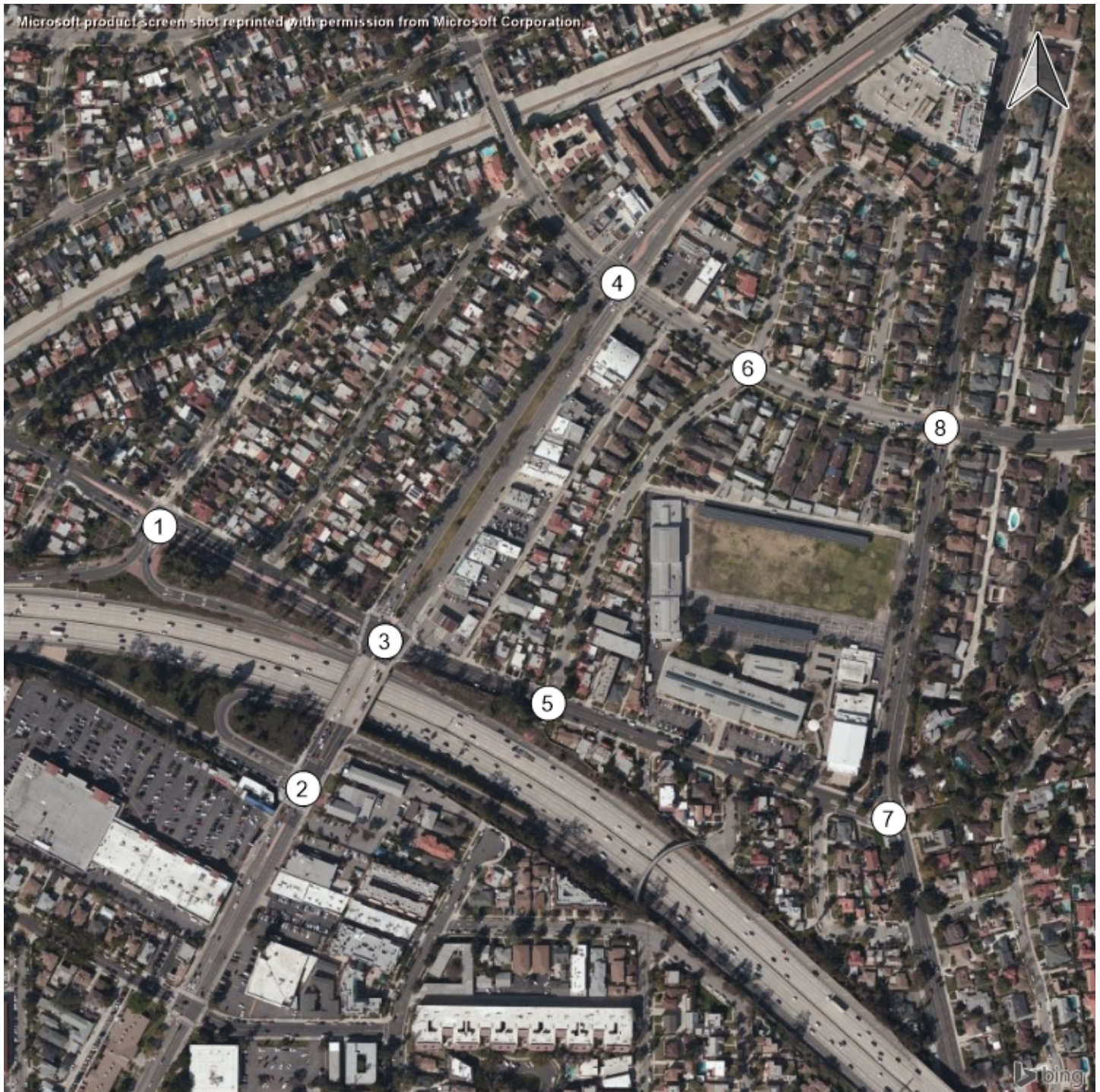
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.06	0.18	0.18	0.04	0.12	0.12	0.04	0.18	0.18	0.02	0.13	0.13
Intersection LOS	A											
Intersection V/C	0.518											

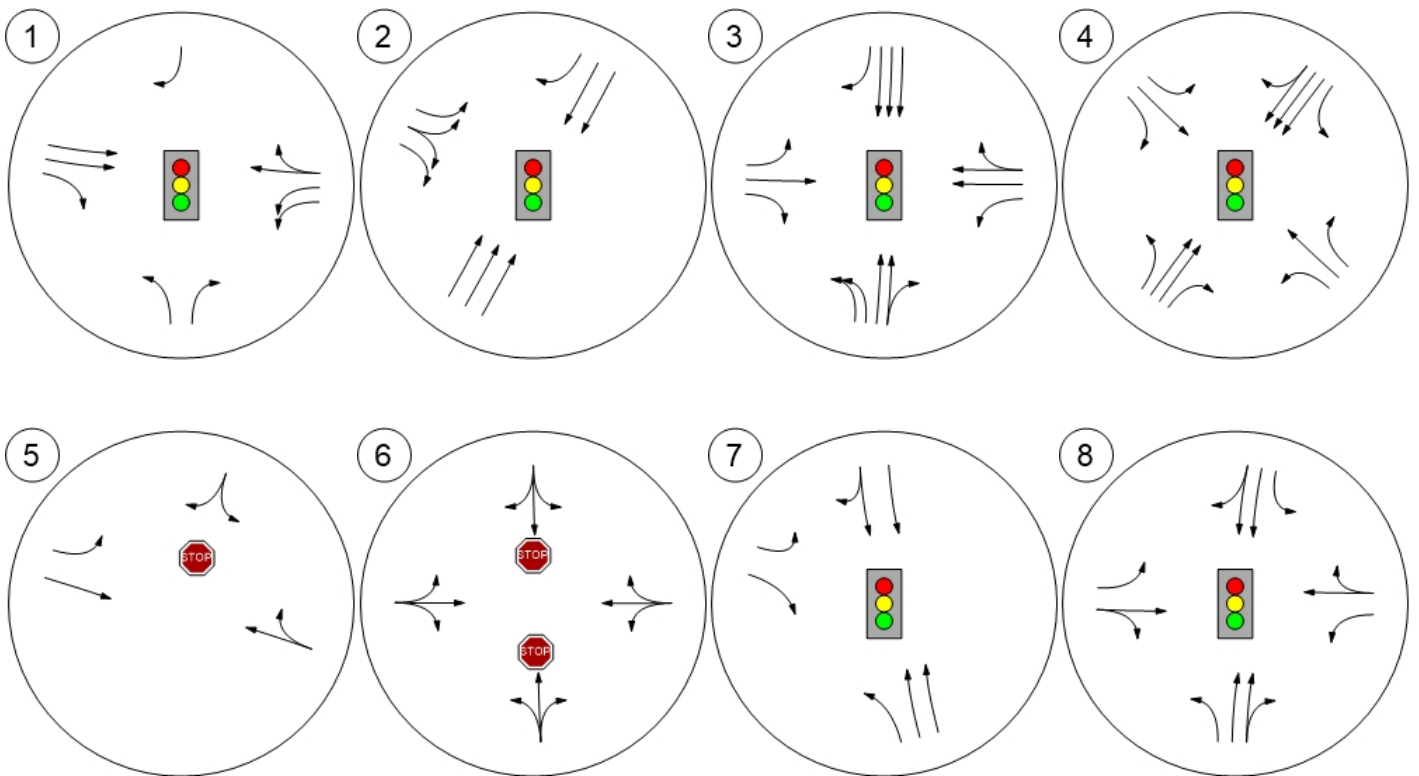


## Study Intersections



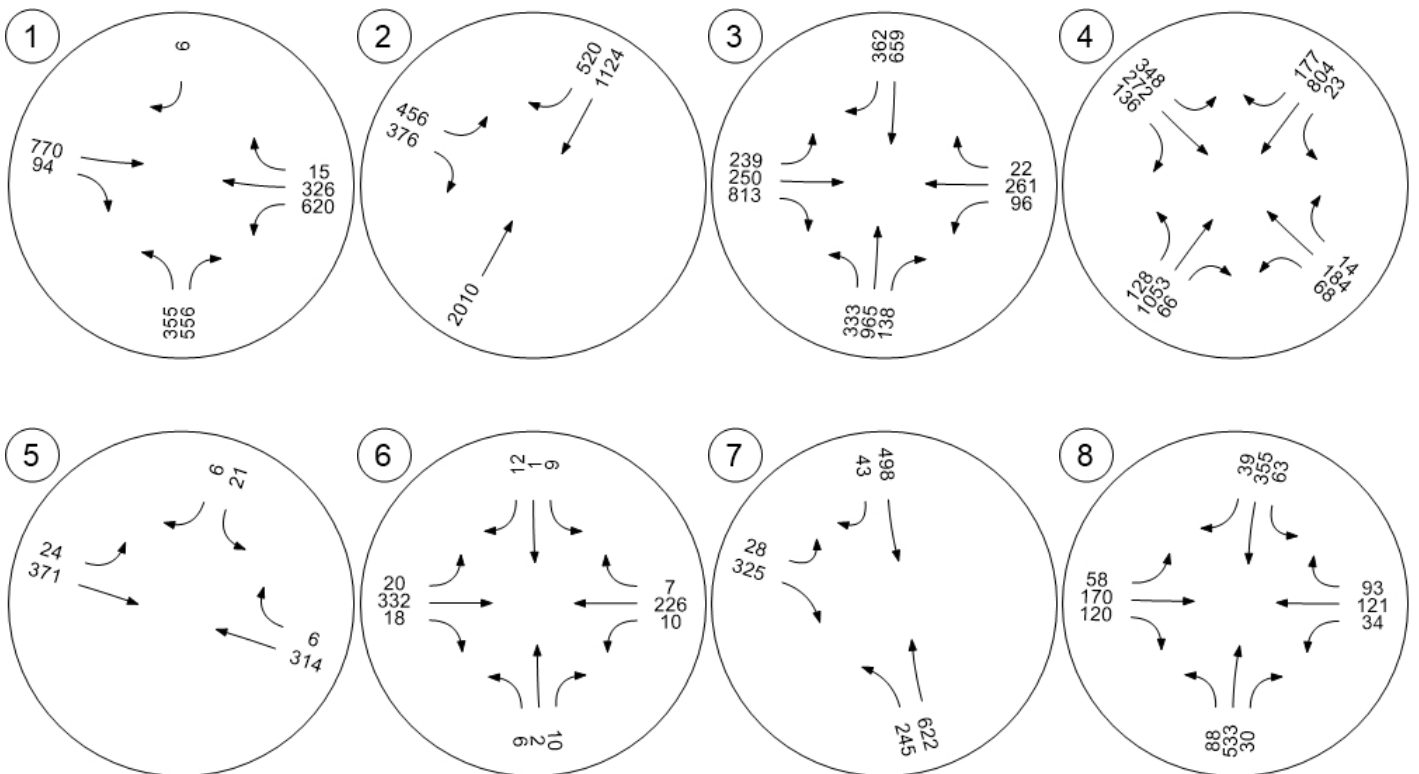


## Lane Configuration and Traffic Control





## Traffic Volume - Future Total Volume



## **Appendix F      Transportation and Fuel Energy Use Calculations**

## Appendices

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Operation-Related Vehicle Fuel/Energy Usage

PROPOSED COMMUTE								
Year	Gas		Diesel		CNG		Electricity	
	VMT	Gallons	VMT	Gallons	VMT	Gallons	VMT	kWh
Proposed Project	695,106	28,511	12,635	353	0	0	5,648	1,898
Total	695,106	28,511	12,635	353	0	0	5,648	1,898

## Construction-Related Fuel/Energy Usage

### CONSTRUCTION WORKER COMMUTE

Year	Gas		Diesel		Electricity	
	VMt	Gallons	VMt	Gallons	VMt	kWh
2018	20,581	837	98	3	118	40
<b>Total</b>	<b>20,581</b>	<b>837</b>	<b>98</b>	<b>3</b>	<b>118</b>	<b>40</b>

### CONSTRUCTION VENDOR TRIPS

Year	Gas		Diesel	
	VMt	Gallons	VMt	Gallons
2018	194	40	1,972	272
<b>Total</b>	<b>194</b>	<b>40</b>	<b>1,972</b>	<b>272</b>

### CONSTRUCTION TRUCK HAUL TRIPS

Year	Gas		Diesel	
	VMt	Gallons	VMt	Gallons
2018	33	9	34,067	5,626
<b>Total</b>	<b>33</b>	<b>9</b>	<b>34,067</b>	<b>5,626</b>

## Proposed Facilities

### PROPOSED CONDITIONS

Vehicle type	Fleet percent	VMT	
		Apartments	Total
		Mid Rise	Apartments Mid Rise
LDA	67.24%	479,662	479,662
LDT1	5.66%	40,377	40,377
LDT2	24.46%	174,482	174,482
MDV	1.00%	7,134	7,134
LHD1	0.25%	1,813	1,813
LHD2	0.09%	610	610
MHD	0.26%	1,881	1,881
HHH	0.40%	2,830	2,830
OBUS	0.00%	0	0
UBUS	0.00%	0	0
MCY	0.64%	4,600	4,600
SBUS	0.00%	0	0
MH	0.00%	0	0
	100.00%	713,388	713,388

### PROPOSED CONDITIONS

Vehicle type	Gas percent	Diesel percent	CNG percent	Electricity percent
LDA	98.30%	0.66%	0.00%	1.04%
LDT1	99.73%	0.06%	0.00%	0.20%
LDT2	99.17%	0.49%	0.00%	0.34%
MDV	67.19%	32.81%	0.00%	0.00%
LHD1	44.52%	55.48%	0.00%	0.00%
LHD2	100.00%	0.00%	0.00%	0.00%
MHD	98.39%	1.56%	0.00%	0.06%
HHH	79.05%	20.95%	0.00%	0.00%
OBUS	0.00%	100.00%	0.00%	0.00%
UBUS	100.00%	0.00%	0.00%	0.00%
MCY	0.00%	100.00%	0.00%	0.00%
SBUS	28.37%	71.63%	0.00%	0.00%
MH	17.83%	82.17%	0.00%	0.00%

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
Junior High School	182.58	235.72	235.72	713,388	713,388
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	182.58	235.72	235.72	713,388	713,388

### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHH	OBUS	UBUS	MCY	SBUS	MH
Junior High School	0.672372	0.056599	0.244582	0.010000	0.002542	0.000855	0.002637	0.003967	0.000000	0.000000	0.006448	0.000000	0.000000
Other Asphalt Surfaces	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000994
Other Non-Asphalt Surfaces	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000994

<< Equal to T6 (<https://www.arb.ca.gov/msei/downloads/emfac2014/emfac2014-vol3-technical-documentation-052015.pdf>)

<< Equal to T7 (<https://www.arb.ca.gov/msei/downloads/emfac2014/emfac2014-vol3-technical-documentation-052015.pdf>)

<< Motor coach, all other buses, and OBUS (<https://www.arb.ca.gov/msei/downloads/emfac2014/emfac2014-vol3-technical-documentation-052015.pdf>)

### PROPOSED CONDITIONS

Vehicle type	VMT	Gasoline mpg	Gallons	VMT	Diesel mpg	Gallons	VMT	CNG mpg	Gallons	VMT	Electricity m/kWh	kWh
LDA	471,499	27.40	17,207	3,188	42.28	75	0	0.00	0	4,975	2.97	1,672
LDT1	40,270	23.59	1,707	25	21.01	1	0	0.00	0	82	2.97	28
LDT2	173,039	21.14	8,185	852	30.90	28	0	0.00	0	591	2.97	199
MDV	4,793	17.46	275	2,341	23.82	98	0	0.00	0	0	2.97	0
LHD1	807	10.04	80	1,006	20.41	49	0	0.00	0	0	0.00	0
LHD2	610	8.74	70	0	18.38	0	0	0.00	0	0	0.00	0
MHD	1,851	4.80	385	29	9.56	3	0	0.00	0	1	0.00	0
HHH	2,237	3.71	604	593	6.06	98	0	2.12	0	0	0.00	0
OBUS	0	4.80	0	0	8.07	0	0	0.00	0	0	0.00	0
UBUS	0	4.05	0	0	5.66	0	0	3.99	0	0	0.00	0
MCY	0	35.68	0	4,600	0.00	0	0	0.00	0	0	0.00	0
SBUS	0	8.89	0	0	7.38	0	0	0.00	0	0	0.00	0
MH	0	4.89	0	0	10.08	0	0	0.00	0	0	0.00	0
	695,106		28,511	12,635		353	0		0	5,648		1,898

Construction Worker Trips Fuel Usage Worksheet

Note: Worker vehicles are "LD\_Mix", which is 50% LDA, 25% LDT1, and 25% LDT2

Activity <sup>1</sup>	Daily trips	Trip miles	Percent in year	Trip days	Annual VMT
2018					
Asphalt Demo	15	14.7	100.00%	20	4,410
Asphalt Demo Haul	0	14.7	100.00%	20	0
Site Preparation	18	14.7	100.00%	5	1,323
Rough Grading	15	14.7	100.00%	16	3,528
Rough Grading Haul	0	14.7	100.00%	16	0
Utility Trenching	5	14.7	100.00%	6	441
Asphalt Paving	20	14.7	100.00%	18	5,292
Landscaping/Field Lighting	18	14.7	100.00%	18	4,763
Architectural Coating	4	14.7	100.00%	18	1,058

Year	LDA VMT	LDT1 VMT	LDT2 VMT	Gasoline <sup>1</sup>						Diesel <sup>1</sup>						Electricity <sup>1</sup>			
				LDA mpg	LDA gallons	LDT1 mpg	LDT1 gallons	LDT2 mpg	LDT2 gallons	LDA mpg	LDA gallons	LDT1 mpg	LDT1 gallons	LDT2 mpg	LDT2 gallons	LDA m/kWh	LDA kWh	LDT1 m/kWh	LDT1 kWh
2018	10,408	5,204	5,204	27.40	373	23.59	220	21.14	244	42.28	2	21.01	0	30.90	1	2.97	36	2.97	4

Gasoline		Diesel		Electricity	
VMT	Gallons	VMT	Gallons	VMT	kWh
20,581	837	98	3	118	40
20,581	837	98	3	118	40

<sup>1</sup> EMFAC2017 v1.0.2.

Year	VMT from gasoline			VMT from diesel			VMT from electricity	
	LDA	LDT1	LDT2	LDA	LDT1	LDT2	LDA	LDT1
2018	98.30%	99.73%	99.17%	0.66%	0.06%	0.49%	1.04%	0.20%

Appendix C: Evidence Used to Define the Average Number of KWH Required to Displace a Gallong of Gasoline

Table A 3: Evidence from U.S. Department of Energy and U.S. Environmental Protection Agency’s fuel economy website<sup>[32]</sup>

Vehicle	Model year	Electric consumption	Gasoline fuel economy	Number of kWh that are equivalent to 1 gallon
Ford Fusion Energi & Ford C-Max Energi	2013	0.34 kWh per mile	43 mpg	14.6
Chevrolet Volt	2013	0.35 kWh per mile	37 mpg	12.9
Chevrolet Volt	2012	0.36 kWh per mile	37 mpg	13.3
Fisker Karma	2012	0.62 kWh per mile	20 mpg	12.4
Toyota Prius	2013	0.29 kWh per mile & 0.2 gal	50 mpg	13.1
Average for five models	-	-	-	13.3 +/- 0.8

Table A 5: Average power consumption per mile traveled over time for different PEV categories

Year range	2012- 2020	2020-2030	2030-2040	2040-2050	2050
Efficiency improvement per year	0.3%	0.8%	0.9%	0.9%	
Year	2012	2020	2030	2040	2050
Relative energy efficiency	1.000	0.976	0.901	0.823	0.752

[https://www.fhwa.dot.gov/environment/climate\\_change/mitigation/publications\\_and\\_tools/ev\\_deployment/page08.cfm](https://www.fhwa.dot.gov/environment/climate_change/mitigation/publications_and_tools/ev_deployment/page08.cfm)

0.34	14.6	2013	0.34
0.35	12.9	2014	0.34
0.36	13.3	2015	0.34
0.34	13.3	2016	0.34
		2017	0.34
		2018	0.34
		2019	0.34
		2020	0.33
		2021	0.33
		2022	0.33
		2023	0.33
		2024	0.32
		2025	0.32
		2026	0.32
		2027	0.32
		2028	0.31
		2029	0.31
		2030	0.31
		2031	0.31
		2032	0.30
		2033	0.30
		2034	0.30
		2035	0.29

Vendor Trips Fuel Usage Worksheet

Note: Hauling vehicles are "HDT\_Mix", which is 50% HHDT (T7), and 50% MHDt (T6)

Activity <sup>1</sup>	Daily trips <sup>1,2</sup>	Trip miles <sup>2</sup>	Percent in year	Trip days <sup>1</sup>	Annual VMT
2018					
Asphalt Demo	4	6.9	100.00%	20	552
Asphalt Demo Haul	0	6.9	100.00%	20	0
Site Preparation	4	6.9	100.00%	5	138
Rough Grading	4	6.9	100.00%	16	442
Rough Grading Haul	0	6.9	100.00%	16	0
Utility Trenching	4	6.9	100.00%	6	166
Asphalt Paving	0	6.9	100.00%	18	0
Landscaping/Field Lighting	7	6.9	100.00%	18	869
Architectural Coating	0	6.9	100.00%	18	0

Year	HHDT (T7) VMT		MHDT (T6) VMT		Gasoline <sup>1</sup>				Diesel <sup>1</sup>			
					HHDT (T7) mpg	HHDT (T7) gallons	MHDT (T6) mpg	MHDT (T6) gallons	HHDT (T7) mpg	HHDT (T7) gallons	MHDT (T6) mpg	MHDT (T6) gallons
2018	1,083	1,083	3.71	0	4.80	40	6.06	179	9.56	93		

<sup>1</sup> EMFAC2017 v1.0.2.

Year	VMT from gasoline		VMT from diesel	
	HHDT (T7)	MHDt (T6)	HHDT (T7)	MHDt (T6)
2018	0.10%	17.83%	99.90%	82.17%

VENDOR			
Gasoline		Diesel	
VMT	Gallons	VMT	Gallons
194	40	1,972	272
194	40	1,972	272

VENDOR AND HAULING COMBINED			
Gasoline		Diesel	
VMT	Gallons	VMT	Gallons
227	49	36,040	5,898
227	49	36,040	5,898



### Truck Haul Trips Fuel Usage Worksheet

Note: Hauling vehicles are HHDT (T7)

Activity	Total Trips <sup>1</sup>
Asphalt Demo	0
Asphalt Demo Haul	32
Site Preparation	0
Rough Grading	0
Rough Grading Haul	1,673
Utility Trenching	0
Asphalt Paving	0
Landscaping/Field Lighting	0
Architectural Coating	0

<sup>1</sup> Based on information provided.

Activity	Daily trips	Mi/Trip <sup>1</sup>	Percent in year	Trip Days <sup>2</sup>	Annual VMT
2018					
Asphalt Demo	0	20	100.00%	20	0
Asphalt Demo Haul	2	20	100.00%	20	640
Site Preparation	0	20	100.00%	5	0
Rough Grading	0	20	100.00%	16	0
Rough Grading Haul	105	20	100.00%	16	33,460
Utility Trenching	0	20	100.00%	6	0
Asphalt Paving	0	20	100.00%	18	0
Landscaping/Field Lighting	0	20	100.00%	18	0
Architectural Coating	0	20	100.00%	18	0

<sup>1</sup> Based on CalEEMod defaults.

<sup>2</sup> Based on information provided.

Year	VMT	Gasoline <sup>1</sup>		Diesel <sup>1</sup>	
		HHDT (T7) mpg	HHDT (T7) gallons	HHDT (T7) mpg	HHDT (T7) gallons
2018	34,100	3.71	9	6.06	5,626

<sup>1</sup> EMFAC2017 v1.0.2.

Year	VMT from gasoline	VMT from diesel
2018	0.10%	99.90%

Gasoline		Diesel	
VMT	Gallons	VMT	Gallons
33	9	34,067	5,626
<b>33</b>	<b>9</b>	<b>34,067</b>	<b>5,626</b>

EMFAC Fuel Usage: Year 2018

Vehicle type	Gasoline			Diesel			Natural Gas			Electricity
	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day
All other buses	0	0	0.00	126,199	13,338	9.46	0	0	0.00	0
LDA	152,352,408	5,559,825	27.40	1,030,227	24,364	42.28	0	0	0.00	1,607,386
LDT1	15,417,611	653,474	23.59	9,679	461	21.01	0	0	0.00	31,333
LDT2	50,345,386	2,381,272	21.14	247,932	8,024	30.90	0	0	0.00	171,905
LHD1	4,057,202	404,071	10.04	1,981,420	97,083	20.41	0	0	0.00	0
LHD2	620,061	70,945	8.74	772,852	42,049	18.38	0	0	0.00	0
MCY	1,074,479	30,114	35.68	0	0	0.00	0	0	0.00	0
MDV	32,040,666	1,835,250	17.46	506,721	21,274	23.82	0	0	0.00	18,850
MH	186,778	38,206	4.89	49,488	4,911	10.08	0	0	0.00	0
Motor coach	0	0	0.00	83,912	14,015	5.99	0	0	0.00	0
OBUS	184,430	38,453	4.80	0	0	0.00	0	0	0.00	0
PTO	0	0	0.00	72,939	15,653	4.66	0	0	0.00	0
SBUS	42,036	4,730	8.89	106,132	14,383	7.38	0	0	0.00	0
T6	791,158	164,686	4.80	3,646,766	381,589	9.56	0	0	0.00	0
T7	5,895	1,590	3.71	6,149,059	1,015,445	6.06	77,453	36,450	2.12	0
UBUS	32,230	7,960	4.05	3,221	569	5.66	424,964	106,408	3.99	1,070
<b>Total</b>	<b>257,150,338</b>	<b>11,190,576</b>	<b>22.98</b>	<b>14,786,547</b>	<b>1,653,158</b>	<b>8.94</b>	<b>502,417</b>	<b>142,858</b>	<b>3.52</b>	<b>1,830,544</b>



EMFAC2017 (v1.0.2) Emissions Inventory

Region Type: Sub-Area

Region: Los Angeles (SC)

Calendar Year: 2018

Season: Annual

Vehicle Classification: EMFAC2011 Categories

Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	Trips	Fuel_Consumption
Los Angeles (SC)	2018	All Other Buses	Aggregated	Aggregated	DSL	2203.841823	126198.5154	18512.27131	13.33769024
Los Angeles (SC)	2018	LDA	Aggregated	Aggregated	GAS	3787140.552	152352408.3	17836906.86	5559.824824
Los Angeles (SC)	2018	LDA	Aggregated	Aggregated	DSL	25490.99936	1030226.731	118708.8221	24.36423964
Los Angeles (SC)	2018	LDA	Aggregated	Aggregated	ELEC	41946.83649	1607385.571	211903.9032	0
Los Angeles (SC)	2018	LDT1	Aggregated	Aggregated	GAS	399738.3858	15417610.87	1824084.367	653.4742189
Los Angeles (SC)	2018	LDT1	Aggregated	Aggregated	DSL	375.8082074	9678.848446	1349.673014	0.460778536
Los Angeles (SC)	2018	LDT1	Aggregated	Aggregated	ELEC	980.9928755	31333.39808	4658.79438	0
Los Angeles (SC)	2018	LDT2	Aggregated	Aggregated	GAS	1276816.328	50345385.82	5957553.211	2381.271962
Los Angeles (SC)	2018	LDT2	Aggregated	Aggregated	DSL	5287.651852	247931.814	26272.04647	8.023941154
Los Angeles (SC)	2018	LDT2	Aggregated	Aggregated	ELEC	4752.691838	171904.9306	24329.14215	0
Los Angeles (SC)	2018	LHD1	Aggregated	Aggregated	GAS	107338.7882	4057201.89	1599188.009	404.070611
Los Angeles (SC)	2018	LHD1	Aggregated	Aggregated	DSL	44862.62848	1981420.14	564315.4291	97.08286984
Los Angeles (SC)	2018	LHD2	Aggregated	Aggregated	GAS	17154.32044	620060.9911	255573.8147	70.94515861
Los Angeles (SC)	2018	LHD2	Aggregated	Aggregated	DSL	18097.2275	772852.4144	227640.3556	42.04905885
Los Angeles (SC)	2018	MCY	Aggregated	Aggregated	GAS	147201.2937	1074478.73	294402.5874	30.11391925
Los Angeles (SC)	2018	MDV	Aggregated	Aggregated	GAS	876188.8226	32040665.85	4042546.609	1835.25006
Los Angeles (SC)	2018	MDV	Aggregated	Aggregated	DSL	11707.10339	506720.8207	58056.4086	21.274123
Los Angeles (SC)	2018	MDV	Aggregated	Aggregated	ELEC	545.0052675	18850.11602	2739.180271	0
Los Angeles (SC)	2018	MH	Aggregated	Aggregated	GAS	18915.51119	186777.7259	1892.30774	38.2060069
Los Angeles (SC)	2018	MH	Aggregated	Aggregated	DSL	4631.581386	49488.17588	463.1581386	4.910961438
Los Angeles (SC)	2018	Motor Coach	Aggregated	Aggregated	DSL	669.4656384	83912.40557	9774.19832	14.01546199
Los Angeles (SC)	2018	OBUS	Aggregated	Aggregated	GAS	4043.618232	184429.6522	80904.71359	38.4531154
Los Angeles (SC)	2018	PTO	Aggregated	Aggregated	DSL	0	72938.83324	0	15.65251738
Los Angeles (SC)	2018	SBUS	Aggregated	Aggregated	GAS	975.8986724	42036.02377	3903.59469	4.729517218
Los Angeles (SC)	2018	SBUS	Aggregated	Aggregated	DSL	3336.476364	106131.8697	38502.47466	14.38269341
Los Angeles (SC)	2018	T6 Ag	Aggregated	Aggregated	DSL	12.17663633	113.4299469	53.57719986	0.013550547
Los Angeles (SC)	2018	T6 CAIRP heavy	Aggregated	Aggregated	DSL	243.3649548	49140.86553	3553.128341	4.738022474
Los Angeles (SC)	2018	T6 CAIRP small	Aggregated	Aggregated	DSL	127.8605024	6842.302406	1866.763335	0.697090223
Los Angeles (SC)	2018	T6 instate construction heavy	Aggregated	Aggregated	DSL	2308.68074	153308.3632	10437.45586	16.37231967
Los Angeles (SC)	2018	T6 instate construction small	Aggregated	Aggregated	DSL	7945.850142	394667.3121	35922.87956	41.87394506
Los Angeles (SC)	2018	T6 instate heavy	Aggregated	Aggregated	DSL	8993.72683	1218914.862	103786.3607	123.4671959
Los Angeles (SC)	2018	T6 instate small	Aggregated	Aggregated	DSL	34935.24515	1709145.941	403147.8855	180.7063566
Los Angeles (SC)	2018	T6 OOS heavy	Aggregated	Aggregated	DSL	139.255167	28226.69154	2033.125439	2.720343488
Los Angeles (SC)	2018	T6 OOS small	Aggregated	Aggregated	DSL	73.55971787	3923.08972	1073.971881	0.399847658
Los Angeles (SC)	2018	T6 Public	Aggregated	Aggregated	DSL	4361.38266	66249.53074	13229.52739	8.75547011

Los Angeles (SC)	2018 T6 utility	Aggregated	Aggregated	DSL	969.7029462	16233.44127	11151.58388	1.844838912
Los Angeles (SC)	2018 T6TS	Aggregated	Aggregated	GAS	14396.12617	791158.0454	288037.6924	164.6862854
Los Angeles (SC)	2018 T7 Ag	Aggregated	Aggregated	DSL	4.476059052	132.8750216	19.69465983	0.024549724
Los Angeles (SC)	2018 T7 CAIRP	Aggregated	Aggregated	DSL	5038.353534	983516.1275	73559.9616	154.5333457
Los Angeles (SC)	2018 T7 CAIRP construction	Aggregated	Aggregated	DSL	561.2130513	110122.729	2537.222385	16.56184689
Los Angeles (SC)	2018 T7 NNOOS	Aggregated	Aggregated	DSL	5807.274037	1198958.303	84786.20095	182.2089288
Los Angeles (SC)	2018 T7 NOOS	Aggregated	Aggregated	DSL	1982.793403	386423.8259	28948.78368	62.0059478
Los Angeles (SC)	2018 T7 POLA	Aggregated	Aggregated	DSL	7420.321085	866877.3689	56394.44025	158.8841722
Los Angeles (SC)	2018 T7 Public	Aggregated	Aggregated	DSL	5241.142731	106203.7548	15898.13294	19.34850793
Los Angeles (SC)	2018 T7 Single	Aggregated	Aggregated	DSL	5505.705073	367334.5435	63535.07321	60.47853432
Los Angeles (SC)	2018 T7 single construction	Aggregated	Aggregated	DSL	3993.918596	273194.2358	18056.35069	44.10897393
Los Angeles (SC)	2018 T7 SWCV	Aggregated	Aggregated	DSL	2051.637213	83826.57238	8001.385132	41.46870509
Los Angeles (SC)	2018 T7 SWCV	Aggregated	Aggregated	NG	1900.523466	77453.03375	7412.041519	36.44976972
Los Angeles (SC)	2018 T7 tractor	Aggregated	Aggregated	DSL	10823.37144	1539152.798	137456.8172	237.8204874
Los Angeles (SC)	2018 T7 tractor construction	Aggregated	Aggregated	DSL	3219.187705	225361.1923	14553.82245	36.64821244
Los Angeles (SC)	2018 T7 utility	Aggregated	Aggregated	DSL	391.760251	7955.141759	4505.242887	1.353019232
Los Angeles (SC)	2018 T7IS	Aggregated	Aggregated	GAS	79.23283967	5894.676941	1585.290656	1.590190551
Los Angeles (SC)	2018 UBUS	Aggregated	Aggregated	GAS	445.5711954	32229.7446	1782.284782	7.960241864
Los Angeles (SC)	2018 UBUS	Aggregated	Aggregated	DSL	31.4305	3221.377108	125.722	0.569277383
Los Angeles (SC)	2018 UBUS	Aggregated	Aggregated	ELEC		12	1070.403311	48
Los Angeles (SC)	2018 UBUS	Aggregated	Aggregated	NG	4012.38417	424964.4125	16049.53668	106.4080125