

**Draft Environmental Impact Report
North Entry Area Plan
City of Healdsburg, Sonoma County, California
State Clearinghouse Number 2018062041**

APPENDICES

Prepared for:



City of Healdsburg

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Date: November 30, 2018

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A.1 - Notice of Preparation and Caltrans Scoping Comment Letter

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City of Healdsburg

**Notice of Preparation of Environmental Impact Report and Public Scoping Meeting
for the North Entry Area Plan**

Date: June 21, 2018

To: California State Clearinghouse-Office of Planning and Research, Public Agencies, and Interested Parties

From (Lead Agency): City of Healdsburg Planning & Development Department
Maya DeRosa, Planning and Building Director
401 Grove Street, Healdsburg, CA 95448
Phone: 707.431.3348
Email: mderosa@ci.healdsburg.ca.us

Subject: Notice of Preparation (NOP) of an Environmental Impact Report (EIR) and Public Scoping Meeting for the North Entry Area Plan

NOP Comment Period: Thursday, June 21, 2018 to Monday, July 23, 2018 by 5:00 p.m.

Public Scoping Meeting: Thursday, June 28, 2018 at 6:00 p.m. at City Council Chamber 401 Grove Street, Healdsburg, CA 95448

NOTICE IS HERBY GIVEN THAT the City of Healdsburg (Lead Agency) will prepare an EIR for the proposed North Entry Area Plan. An EIR will be prepared to analyze the effects associated with the proposed plan, as well as to explore alternatives to the plan and possible mitigation measures to avoid or lessen identified effects. This NOP is being distributed to applicable responsible agencies, trustee agencies, and interested parties as required by the California Environmental Quality Act (CEQA) and the City of Healdsburg's CEQA Implementation Procedures. Interested parties are requested to comment on the plan's scope and on the content of the descriptions of the significant environmental issues, reasonable alternatives, and mitigation measures to be explored in the EIR. Information regarding the plan description, location, and public review process is provided below.

30-DAY COMMENT PERIOD: The City of Healdsburg solicits comments regarding the scope and content of the EIR from all interested parties requesting notice, responsible agencies, agencies with jurisdiction by law, trustee agencies, and involved agencies. In accordance with the time limits established by CEQA, the NOP public review period will begin on Thursday, June 21, 2018 and end on Monday, July 23, 2018. In the event that no response or request for additional time is received by any Responsible or Trustee Agency by the end of the review period, the Lead Agency may presume that the Responsible Agency or Trustee Agency has no response to make [CEQA Guidelines Section 15082(b)(2)]. Please send your written/typed/e-mailed comments (including name, affiliation, telephone number, and contact information) on or before July 23, 2018 by 5:00 p.m. to the Lead Agency contact listed above. The City's e-mail system virus protection measures, as well as the variety of potential attachment formats, limits the ability for attachments to be delivered by e-mail.

Any e-mail attachments should be delivered separately, in writing, and in person or by regular mail, to the address specified above.

PUBLIC SCOPING MEETING: The City of Healdsburg will hold a public Scoping Meeting to 1) inform the public and interested agencies about the proposed plan, and 2) solicit public comment on the scope of the environmental issues to be addressed in the EIR, as well as the range of practical alternatives to be evaluated. The date, time, and place of the public scoping meeting is Thursday, June 28, 2018 at 6:00p.m. at City Council Chamber located at 401 Grove Street, Healdsburg, CA 95448.

PLAN-RELATED DOCUMENTS: Additional information regarding the plan, including supporting technical studies and evaluations, is available at the Healdsburg Planning and Building Department, located at 401 Grove Street, Healdsburg, CA.

PLAN AREA LOCATION: Located in the City of Healdsburg, Sonoma County, California (see Exhibit 1: Regional Location Map) the plan area includes the property located at 16997 Healdsburg Avenue, commonly known as the “Comstock property,” and includes a portion of Healdsburg Avenue right-of-way that runs parallel along the entire eastern boundary of the property frontage. The plan area is located on the Healdsburg, California, United States Geological Survey 7.5-minute topographic quadrangle map, Township 9 North, Range 9 West, Section 8 (Latitude 38°61’04” North; Longitude 122°86’91” West).

The plan area is bounded by the northern city limit of Healdsburg to the north, the center line of the Healdsburg Avenue right-of-way to the east, Simi Winery to the south, and U.S. Highway 101 to the west (see Exhibit 2: Local Vicinity Map). The plan area contains of 32.17 acres of privately owned land including three contiguous lots that would accommodate mixed-use development (APNs 091-060-022, 019, and 009), a portion of the North Coast Railroad Authority (NCRA) right-of-way property (APN 091-060-033), private- and State-owned landscape parcels between the NCRA right-of-way and Healdsburg Avenue (APN 091-060-025 and APN 091-060-026), and a portion of Healdsburg Avenue.

PLAN DESCRIPTION: The North Entry Area Plan (proposed plan) would establish more specific guiding principles and a design framework for development of the Comstock property, as an amendment of the Healdsburg 2030 General Plan Land Use Element. The primary purpose of the area plan is to create a long-term vision for development that will realize the property’s potential, focus and unify individual decisions for development of the site, and provide greater predictability and certainty regarding future development of this area consistent with the intent of the City of Healdsburg’s 2030 General Plan.

The plan area is an important locational gateway that provides a land use transition from the Alexander Valley agricultural uses to the north, and Healdsburg town uses to the south. The plan area was historically used as a lumber mill, storage, or fabrication facility since the 1940s¹. The Comstock property comprises 30.16 contiguous acres of land between U.S. Highway 101 and the NCRA railroad right-of-way, with an additional 2.17 acre strip between the NCRA right-of-way and

¹ Initial Study—Regrading and Demolition Plan for 32-Acre Site Located at 16977 Healdsburg Avenue, January 6, 2004.

Healdsburg Avenue. The 80-foot wide NCRA right-of-way extends along the easterly property frontage, between Healdsburg Avenue and the main 30-acre parcel area. Site access is currently constrained due to a single driveway crossing at the NCRA tracks from Healdsburg Avenue, which would need to be addressed prior to any significant future development of the property.

The plan area consists of relatively flat terrain, but contains existing natural features such as active strike-slip faults and riparian habitat. Given such site constraints, only approximately 18 acres of the plan area, wholly contained within the Comstock property, is considered developable. To address development constraints and avoid potential related impacts, the City would implement mitigation and/or condition future development consistent with the environmental analysis prepared for the North Entry Area Plan.

Within the plan area, the Comstock property is designated Mixed-Use in the Healdsburg 2030 General Plan and Mixed-Use zoning district in the Healdsburg Municipal Code. The North Entry Area Plan would permit a mix of land uses on the Comstock property's 18 developable acres consistent with the maximum buildout assumptions listed in Table 1:

Table 1: Proposed Plan Area Land Use Type and Maximum Buildout Assumptions

Land Use Type	Buildout Assumption
Residential ¹	290 units ³
Nonresidential (Retail/Services/Restaurant/Lodging) ²	200,000 gross square feet ⁴
Notes: ¹ Includes residential mixed-use, multi-family housing (including families, singles, workforce and seniors), and residential care facilities. ² Includes grocery market or specialty food sales (e.g., 3,500 gsf or less), other retail (e.g., clothing, art, home décor, flowers, books, etc.), personal services (e.g., daycare, dry cleaning, fitness, massage, pet grooming, etc.), business support services and offices, instructional services, medical services and visitor lodging, restaurant and café, and similar uses, and does not include large-box retail stores or regional retailer shopping centers. ³ Roughly equivalent to 16 units-per-acre based on 18 acres of developable land. ⁴ Roughly equivalent to 0.25 FAR based on 18 acres of developable land.	

An average of 1,500 gross square feet is assumed for the proposed residential units to account for a range of unit sizes. Thus, total planned building area of up to 435,000 gross square feet of residential and 200,000 gross square feet of nonresidential would constitute a total anticipated building area of 635,000 gross square feet. This would include multi-story buildings on the developable 18-acre area (note that hillside areas would remain undeveloped). The proposed development would allow for approximately 12 acres of open and undeveloped land to remain within the developable property. City development standards would allow buildings in the plan area up to a maximum height of 50 feet. The North Entry Area Plan would encourage stepping of heights, from lower building heights along Healdsburg Avenue to taller buildings toward the hillside portions of the plan area.

The proposed land uses described in the area plan are consistent with land use types established for the Mixed-Use zoning district. The proposed area plan is a regulatory document that will be used to

evaluate future development, together with the Healdsburg 2030 General Plan, and the Healdsburg Land Use Code, and it will provide guidance to City decision-makers and members of the public when considering future site-specific development projects in the plan area.

One such site-specific development project likely to be considered under the area plan is a current proposal by Comstock Healdsburg, LLC to develop the Comstock property as a mixed-use community, which may include senior living units, workforce housing, a hotel, and a variety of commercial uses.

PURPOSE OF THIS NOTICE: In accordance with the State CEQA Guidelines (14 California Code of Regulations [CCR] Section 15082), the City of Healdsburg has prepared this NOP to inform agencies and interested parties that an EIR will be prepared for the above-referenced plan. The purpose of an NOP is to provide sufficient information about the area plan to allow agencies and interested parties the opportunity to provide a meaningful response related to the scope and content of the EIR, including mitigation measures that should be considered and alternatives that should be addressed (State CEQA Guidelines 14 CCR Section 15082[b]).

ENVIRONMENTAL REVIEW PROCESS: Following completion of the 30-day NOP public review period, the City of Healdsburg will incorporate relevant information into the Draft EIR, including results of public scoping and technical studies. The Draft EIR will be circulated for public review and comment for a 45-day public review period. On the basis of the Initial Study prepared for the proposed area plan, topics with effects determined to be potentially significant will be further analyzed in the EIR and include the following: transportation/traffic, air quality, greenhouse gas emissions, noise, and aesthetics. Impacts in other topical areas that have been determined to be not applicable, no impact, less than significant, or less than significant with mitigation (as specifically set forth for each impact in question) will not be evaluated further in the EIR. These topics include: biological resources, hydrology/water quality, hazards/hazardous materials, cultural resources, land use, population and housing, public services, recreation, utilities/service systems, geology and soils, mineral and energy resources, and agricultural and forest resources.

The City of Healdsburg requests that any potential Responsible or Trustee Agency responding to this notice do so in a manner consistent with CEQA Guidelines Section 15082(b). Parties that have submitted their names and email or mailing addresses will be notified as part of this CEQA review process. A copy of this NOP can also be found on the City's active applications website at <https://www.ci.healdsburg.ca.us/515/Applications-and-Studies-in-Progress>, and on file at the City of Healdsburg Planning and Building Department (401 Grove Street, Healdsburg, CA 95448). If you wish to be placed on the mailing list or need additional information, please contact Maya DeRosa, Planning and Building Director, City of Healdsburg, at 707.431.3346 or mderosa@ci.healdsburg.ca.us.

ATTACHMENTS:

Exhibit 1: Regional Location Map

Exhibit 2: Local Vicinity Map

DEPARTMENT OF TRANSPORTATION

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*Making Conservation
a California Way of Life.*

July 20, 2018

Ms. Maya DeRosa
Director of Planning & Building Department
City of Healdsburg
Planning & Building Department
401 Grove Street
Healdsburg, CA 95448

SCH# 2018062041
04-SON-2018-00299
SON – 101 – 37.528
GTS ID 11213

North Entry Area Plan – Notice of Preparation (NOP)

Dear Ms. DeRosa:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above-referenced project. In tandem with the Metropolitan Transportation Commission's (MTC) Sustainable Communities Strategy (SCS), Caltrans mission signals a modernization of our approach in evaluating and mitigating impacts to the State Transportation Network (STN). Caltrans' *Strategic Management Plan 2015-2020* aims to reduce Vehicle Miles Travelled (VMT) by tripling bicycle and doubling both pedestrian and transit travel by 2020. Our comments are based on the NOP.

Project Understanding

The North Entry Area Plan (Plan) would establish specific guiding principles and a design framework for development of the Comstock property, as an amendment of the Healdsburg 2030 General Plan Land Use Element. The Comstock property is designated Mixed-Use in the Healdsburg 2030 General Plan and Mixed-Use zoning district in the Healdsburg Municipal Code. The Plan would permit a mix of land uses on the Comstock property's 18 developable acres that is consistent with the maximum build-out of 290 residential units and/or 200,000 gross square feet of Retail/Services/Restaurant/Lodging space. An average of 1,500 gross square feet is assumed for the proposed residential units to account for a range of unit sizes. Thus, total planned building area of up to 435,000 gross square feet of residential and 200,000 gross square feet of nonresidential would constitute a total anticipated building area of 635,000 gross square feet. The Plan would allow for approximately 12 acres of open and undeveloped land within the site. City development standards would allow buildings in the Plan area up to a maximum height of 50 feet. The Plan would encourage stepping of heights, from lower building heights along Healdsburg Avenue to taller buildings toward the hillside portions of the Plan area.

The Plan area consists of relatively flat terrain, but contains existing natural features such as active strike-slip faults and riparian habitat. Given such site constraints, only approximately 18 acres of the Plan area, wholly contained within the Comstock property, is considered developable. To address development constraints and avoid potential related impacts, the City would implement mitigation and/or condition future development consistent with the environmental analysis prepared for the North Entry Area Plan.

The Plan area is bounded by the northern city limit of Healdsburg to the north, the center line of the Healdsburg Avenue right-of-way (ROW) to the east, Simi Winery to the south, and U.S. 101 to the west. The Plan area contains 32.17 acres of privately owned land including three contiguous lots that would accommodate mixed-use development, a portion of the North Coast Railroad Authority (NCRA) ROW, private- and State-owned landscape parcels between the NCRA ROW and Healdsburg Avenue, and a portion of Healdsburg Avenue. Regional access to the Plan area is gained at either US 101 interchanges at Lytton Springs Road to the north or Dry Creek Road to the south.

Travel Demand Analysis

In Caltrans' *Smart Mobility 2010: A Call to Action for the New Decade*, this project falls under **Place Type 5 Rural and Agricultural Lands – Rural Towns**, which includes settlement patterns with widely-spaced towns separated by farms, vineyards, orchard, or grazing lands, which can significantly affect land uses, character and mobility needs. This place type has a mix of housing, services and public institutions in compact form to serve surrounding rural areas. Given this Place Type and intensification of use, which typically leads to high levels of VMT and corresponding low levels of active transportation, we recommend providing VMT analysis resulting from the proposed project, which includes:

- A vicinity map, regional location map, and site plan clearly showing the project's location in relation to the STN. Clearly identify State ROW, bicycle paths, and transit facilities within the study area.
- A VMT analysis pursuant to the City's guidelines or, if the City has no guidelines, the Office of Planning and Research's Draft Guidelines. Projects that result in automobile VMT per capita greater than 15 percent below existing (i.e. baseline) city-wide or regional values for similar land use types may indicate a significant impact. If necessary, mitigation for increasing VMT should be identified and should support transit and active transportation modes.
- Potential safety issues for all road users should be identified and fully mitigated.
- The project's primary and secondary effects on pedestrians, bicycles, disabled travelers and transit performance should be evaluated, including countermeasures and trade-offs resulting from mitigating VMT increases. Access to pedestrians, bicycle, and transit facilities must be maintained.

Sustainable Community

We recommend that Plan area be designated a Priority Development Area (PDA). As such, the area should comply with all PDA development standards including pedestrian, bicycle, and transit infrastructure and network.

Vehicle Trip Reduction

Given the intensification of use and the opportunities to reduce VMT, we encourage the City to establish a Transportation Management Association (TMA) in partnership with other developments in the area to pursue aggressive trip reduction targets with Lead Agency monitoring and enforcement. In addition, the Transportation Demand Management (TDM) elements described below should be included in the program to promote smart mobility and reduce regional VMT and traffic impacts to the STN. Transportation Demand Management programs should be documented with annual monitoring reports by an onsite TDM coordinator to demonstrate effectiveness. If the project does not achieve the VMT reduction goals, the reports should also include next steps to take in order to achieve those targets.

- Commuter subsidy for transit, carpool, and vanpool for residents and employees on an ongoing basis;
- Project design to encourage walking, bicycling, and convenient transit access;
- Onsite TDM coordinator;
- Ten percent vehicle parking reduction;
- Unbundled parking;
- Electric vehicle (EV) charging stations and designated parking spaces for EVs and clean fuel vehicles;
- Encourage membership in a carshare program such as Getaround;
- Dedicated parking spaces for carpooling employees;
- Transit and trip planning resources such as a commute information kiosk;
- Enhanced bus stops including bus shelters;
- Bicycle route mapping resources and bicycle parking incentives;
- Bicycle share membership;
- Fix-it bicycle repair station(s); and
- Decrease headway times and improve way-finding on Sonoma County Transit Authority bus routes to provide a better connection between the project and the planned Healdsburg Sonoma-Marin Area Rail Transit (SMART) Station, and regional destinations. Providing these connections with streets configured for alternative transportation modes will encourage residents to utilize nearby Sonoma County Transit bus routes 60 and 60X, the planned Healdsburg SMART Station and Healdsburg Depot, thereby potentially reduce VMT and increase sustainable transportation modes.

Ms. Maya DeRosa, Director of Planning & Building Department
City of Healdsburg
July 20, 2018
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For additional TDM options, please refer to Chapter 8 of Federal Highway Administration's *Integrating Demand Management into the Transportation Planning Process: A Desk Reference*, which is available online at: <http://www.ops.fhwa.dot.gov/publications/fhwahop12035/fhwahop12035.pdf>. For information about parking ratios, please see MTC's report, *Reforming Parking Policies to Support smart growth*, or visit the MTC parking webpage: http://www.mtc.ca.gov/planning/smart_growth/parking.

Cultural Resources

As part of the programmatic environmental review for the Area Plan, we recommend that, in compliance with California Environmental Quality Act (CEQA) Guidelines Section 15064.5, the City of Healdsburg require environmental review for specific projects that includes the preparation of cultural resource technical studies that at a minimum contain a records search at the Northwest Information Center of the California Historical Resources Information System (CHRIS) at Sonoma State University, Native American consultation, and a field survey of the project area by a qualified archaeologist.

If an encroachment permits are needed for work within Caltrans ROW, we may require cultural resource technical studies be prepared in compliance with CEQA, Public Resources Code (PRC) 5024, and the Caltrans Standard Environmental Reference (SER) Chapter 2 (<http://www.dot.ca.gov/ser/vol2/vol2.htm>). Should ground-disturbing activities take place within Caltrans ROW and there is an inadvertent archaeological or burial discovery, in compliance with CEQA, PRC 5024.5, and the SER, all construction within 60 feet of the find shall cease and the Caltrans District 4 Office of Cultural Resource Studies (OCRS) shall be immediately contacted at (510) 622-1673.

Biological Resources

Caltrans recommends that standard environmental Best Management Practices be followed in all construction activities. The nearby riparian habitat increases the number of special status species that may occur, therefore please conduct a literature search and pre-construction surveys to avoid adverse impacts to the riparian habitat. If this area serves as a connection corridor, other avoidance/minimization/mitigation measures may be needed. Furthermore, if trees will be removed, it is recommended to do so outside of the nesting bird season February 1 - September 15 in order to comply with the Migratory Bird Treaty Act. Tree removal must also comply with Sonoma County Tree Ordinances.

Traffic Impact Fees

Given the potential increase in VMT and proximity to US 101, the project should be conditioned to contribute fair share traffic impact fees toward multi-modal and regional transit improvements to fully mitigate cumulative impacts to regional transportation. Specifically, new projects should be conditioned to contribute fair share impact fees toward the planned Class I multi-use path or

Ms. Maya DeRosa, Director of Planning & Building Department
City of Healdsburg
July 20, 2018
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Class II bike lanes on Healdsburg Avenue as identified in the *2008 Healdsburg Bicycle and Pedestrian Master Plan*, as well as fully built-out bus stops, including shelters, etc. along the project frontage as a condition of approval. The fair share information should also be presented in the Mitigation Monitoring and Reporting Plan of the Draft Environmental Impact Report (DEIR). Required roadway improvements should be completed prior to the issuance of the Certificate of Occupancy.

Please identify in text and graphics existing and proposed improvements for the pedestrian, bicycle, and transit networks. The City should estimate the cost of needed improvements, expansion, and maintenance for the Plan area, as well as identify viable sources of funding, correlated with the pace of improvements, and a scheduled plan for implementation along with the DEIR.

Encroachment Permit

Please be advised that any sign or work within Caltrans ROW will require an encroachment permit prior to construction. To apply for an encroachment permit, please complete an encroachment permit application, environmental documentation, and five (5) sets of plans clearly indicating State ROW, and submit to the following address: David Salladay, District Office Chief, Office of Permits, California Department of Transportation, District 4, P.O. Box 23660, Oakland, CA 94623-0660. Traffic-related mitigation measures should be incorporated into the construction plans prior to the encroachment permit process. See the website link below for more information: <http://www.dot.ca.gov/hq/traffops/developserv/permits>.

Lead Agency

As the Lead Agency, the City of Healdsburg is responsible for all project mitigation, including any needed improvements to the STN. The project's financing, scheduling, implementation responsibilities and monitoring should be fully discussed for all proposed mitigation measures.

Ms. Maya DeRosa, Director of Planning & Building Department
City of Healdsburg
July 20, 2018
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Should you have any questions regarding this letter, please contact Stephen Conteh at (510) 286-5534 or stephen.conteh@dot.ca.gov.

Sincerely,



PATRICIA MAURICE
District Branch Chief
Local Development - Intergovernmental Review

c: State Clearinghouse

A.2 - Initial Study

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**Initial Study
North Entry Area Plan
City of Healdsburg, Sonoma County, California**



Prepared for:
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401 Grove Street
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707.431.3348

Contact: Maya DeRosa, Planning and Building Director

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Contact: Jason Brandman, Project Director
Kelsey Bennett, Project Manager

June 21, 2018

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ACRONYMS AND ABBREVIATIONS

µg/m ³	micrograms per cubic meter
°F	degrees Fahrenheit
°C	degrees Celsius (Centigrade)
ALUP	Airport Land Use Commission
Cal OES	California Governor’s Office of Emergency Services
CALUP	comprehensive airport land use plan
CARB	California Air Resources Board
Caltrans	California Department of Transportation
CDFW	California Department of Fish and Game
CEQA	California Environmental Quality Act
DPR	Department of Parks and Recreation
DTSC	Department of Toxic Substances Control
EIR	Environmental impact report
FEMA	Federal Emergency Management Agency
FRA	Federal Railroad Administration
GHG	greenhouse gas
IS	Initial Study
mph	miles per hour
MU	Mixed-Use
NAHC	Native American Heritage Commission
NCRA	North Coast Railroad Authority
MND	mitigated negative declaration
NCRA	North Coast Railroad Authority
NOAM	Naturally Occurring Asbestos Minerals
NSAPCD	North Sonoma County Air Pollution Control District
PM	particulate matter
RWQCB	Regional Water Quality Control Board
SHPO	State Historic Office of Preservation
SMART	Sonoma-Marin Area Rail Transit District
SUSWMP	Standard Urban Storm Water Mitigation Plan
SWPPP	Storm Water Pollution Prevention Plan
TAC	toxic air contaminant
TCR	Tribal Cultural Resource
USACE	United States Army Corps of Engineers
VOC	volatile organic compounds

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SECTION 1: INTRODUCTION

1.1 - Overview and Purpose

The Healdsburg 2030 General Plan identifies a total of five areas within the City that warrant further study beyond the elements contained in the General Plan (at the time of its adoption in 2009). These special study areas were selected based on unique locations or functions in the City. One of these five study areas is the North Entry Study Area, which encompasses the vacant 32.17-acre property (a 30.16-acre portion currently owned by Comstock Healdsburg LLC, referred to as the “Comstock property”) on the west side of Healdsburg Avenue, Healdsburg Avenue from the northern City boundary south to Foss Creek, and approximately 256 acres of land immediately to the east of identified portion of Healdsburg Avenue.

The City is preparing the North Entry Area Plan (referred herein as the “proposed plan”), as an amendment to the General Plan land use element and policies, to establish more specific guiding principles and a design framework for development of the 30.16-acre Comstock property within the proposed plan study area, located on the west side of Healdsburg Avenue. The primary purpose is to create a long-term vision for development that will realize the property’s potential consistent with the Healdsburg 2030 General Plan. The proposed plan is considered an “area plan,” in that it does not meet the content requirement of a Specific Plan under California state planning law. It is a regulatory document that amends the general plan and does provide clear guidance to City decision-makers and members of the public when considering future site-specific development projects in the plan area.

The privately-owned 30.16-acre Comstock property is located within the plan area. The property consists of four vacant lots within the proposed plan area boundary. The plan area also encompasses an existing railroad right-of-way, state owned lands, and public streets (referred to herein as “the plan area”). Following adoption of the proposed North Entry Area Plan, Comstock Healdsburg LLC intends to develop its property with mixed use development. The plan area is an important locational gateway that provides land use transition from Alexander Valley agricultural uses to Healdsburg town uses. It is anticipated that the proposed plan will also be relied upon by the City when considering a specific proposal by Comstock Healdsburg LLC to develop the plan area in phases with senior residential, family residential, hotel, restaurant, commercial office, and public plaza uses.

The purpose of this Initial Study (IS) is to identify potential environmental impacts from implementation of the proposed plan within the City of Healdsburg, California. Pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15367, the City of Healdsburg (City), which has discretionary authority over the proposed plan, is the Lead Agency in the preparation of this IS and additional environmental review documentation required for the proposed plan. This document is used to determine the level of environmental analysis required within the pending Environmental Impact Report (EIR) and to provide the basis for input from public agencies, organizations, and interested members of the public.

The remainder of this section provides a brief description of the plan area location and the characteristics of the proposed plan. Section 2 includes an environmental checklist giving an overview of the list of potential impacts that may result from plan implementation.

The remainder of this section provides a brief description of the plan area location and the characteristics of the proposed plan. Section 2 includes an environmental checklist giving an overview of the list of potential impacts that may result from project implementation.

1.2 - Plan Area Location and Properties Ownership

The plan area primarily encompasses 32.17 acres located at 16977 Healdsburg Avenue in the City of Healdsburg, Sonoma County, California (Exhibit 1). The plan area is located within the northern Healdsburg city limit between U.S. Highway 101 and Healdsburg Avenue. The plan area consists of the following:

- Three continuous parcels owned by Comstock Healdsburg LLC, totaling 30.16 acres (APN 091-060-022, 091-060-019, 091-060-009) located between U.S. Highway 101 and Healdsburg Avenue. These parcels are referred to as the “Quaker Hill site” and “Quaker Hill property” in the City’s General Plan because these parcels were owned by Quaker Hill Associates at the time the General Plan was adopted. The parcels were purchased by Comstock Healdsburg, LLC in 2016. For the purposes of this initial study, these parcels are referred to as the “Comstock property” to accurately reflect the change in the property’s ownership.
- A portion of the North Coast Rail Authority (NCRA) right-of-way (APN 091-060-033), which includes a freight rail line and alignment for future Sonoma-Marin Rail Transit (SMART) rail service.
- Property between the NCRA railway right-of-way and Healdsburg Avenue that includes a 2.17-acres of the Comstock Healdsburg, LLC parcel (APN 091-060-025) and 0.15-acre parcel owned by the State of California (APN 091-060-026). The Comstock Healdsburg, LLC parcel extends the majority length of the plan area between the railway right-of-way and Healdsburg Avenue. An existing pipeline easement also runs along the State-owned parcel as well as a portion of the central portion of the plan area. The State of California parcel is located adjacent to and north of the Comstock property.
- A portion of Healdsburg Avenue, given that the State-owned parcel is located adjacent to and north of the Comstock property and extends to the centerline of Healdsburg Avenue along the frontage of the Comstock property.

The proposed plan area is located on the Healdsburg, California, United States Geological Survey 7.5-minute topographic quadrangle map, Township 9 North, Range 9 West, Section 8 (Latitude 38°61’04” North; Longitude 122°86’91” West).

1.2.1 - Surrounding Land Uses

Immediate surrounding land uses to the plan area include U.S. Highway 101 to the west, Healdsburg Avenue to the east, a hillside parcel privately owned by Lytton Rancheria of California to the north,

and Foss Creek and a vacant parcel owned by SIMI Winery to the south (Exhibit 2). Farther west and east of the plan area are agricultural areas, and farther south of the plan area are residential uses.

1.2.2 - General Plan Land Use Designation and Zoning

The City's General Plan designates the plan area as mixed-use development (MU 10-16 units per acre) land use. The Zoning Code establishes the plan area as Mixed Use (MU) zone district.

1.3 - Plan Area Background

In 2004, the vacant 30.16-acre Comstock property within the plan area was improved for potential development. Improvements consisted of demolition of a former lumber mill facility buildings, contaminated soil remediation, grading, drainage updates, and wetland mitigation. The property was mass graded to establish positive sheet flow drainage toward Healdsburg Avenue, and included an on-site collection, retention, and a discharge drainage system was constructed to improve the overall quality of stormwater runoff. The ditch along the western side of the proposed plan area was realigned to a location closer to the toe of U.S. Highway 101 embankment slope. The flat portion of the property was enlarged to the north, and the ditches along this toe of the hill to the north were realigned, creating approximately 18 acres of level land area. Realigned ditches along the toes of the western and northern slopes of the property were planted with native vegetation to mitigate impacts from previous grading activities performed within the plan area.

A ditch along the eastern side of the Comstock property and parallel to the railroad line was re-sloped to reduce bank erosion. Drainage now sheet flows southeastward towards the drainage ditch, which then flows into a 0.7-acre stormwater detention basin at the southern end of the Comstock property and plan area. The basin was sized to handle smaller storm events and used to filter sediments and contaminants, thus improving the quality of runoff from the plan area into Foss Creek. The City of Healdsburg Planning and Building Division issued a permit for the site demolition and regrading work which was completed and inspected in January 2005.

Concurrently, the North Coast Railroad Authority (NCRA) approved an increase in the width of the proposed plan area's existing private road-railroad crossing easement from 20 feet to 70 feet in order to consolidate access for vehicular, pedestrians, and utilities to the plan area at one location and to accommodate future improvements for the roadway. The Public Utilities Commission Resolution TRD-258 grants an extension to October 23, 2018 of its Decision 10-09-034 (dated September 23, 2010) to permit conversion of the private at-grade crossing to a public crossing (CPUC Crossing No. 005-70.85, US DOT No. 968011 N). The City of Healdsburg has entered into an agreement to accept the crossing once the property owner completes installation of approved crossing improvements.

1.4 - Existing Plan Area Characteristics

The City considers the proposed plan area to be a transition area between the rural character of the Alexander Valley wine region to the north and the urban character of downtown Healdsburg two miles to the south. The plan area is located within the low hills that define the western edge of Alexander Valley, generally flanked by northwest-trending mountain ranges. The plan area is located

near the Parkland Farms residential neighborhood to the southeast and the proposed Saggio Hills (now known as “Montage Healdsburg”) development immediately east of Healdsburg Avenue. Local water bodies include Lytton Lake to the northwest and Foss Creek to the south of the plan area.

The irregularly-shaped plan area is largely vacant land and contains the railroad right of way, drainage improvements, and a portion of Healdsburg Avenue. The majority of the plan area is located on relatively flat, grass-covered land that was previously graded. The northern and southwestern edges of the plan area consist of sloping hillsides with woodland vegetation. Existing drainage on-site includes swales at the perimeter of the regraded land within the Comstock property, and a water quality basin in the southeast. There are two active faults within the plan area that were identified in the environmental review conducted in 2004 for the site remediation work associated with a former lumber mill on the Comstock property. Both faults run diagonally from northwest to southeast, one on the northern portion of the plan area and the other on the southern portion of the plan area.

The Northwestern Pacific Railroad line traverses the proposed plan area from north to south along an 80-foot wide right-of-way. The right-of-way is located along the eastern portion of the plan area and roughly parallel to Healdsburg Avenue. The Northwestern Pacific Railroad line was constructed in 1889 when it was extended northward from Healdsburg to Ukiah. The Sonoma-Marín Area Rail Transit (SMART) District, created by the State Legislature in 2003, obtained a perpetual passenger service easement over the railroad line. Passenger rail services are planned along this line through the plan area in the future.

1.5 - Proposed Plan Description

1.5.1 - Land Uses

The proposed plan contemplates the future construction and operation of a mixed-use community that would include residential and nonresidential land uses. Table 1 summarizes the proposed plan.

Table 1: Proposed Plan Area Land Use Type and Buildout Assumptions

Land Use Type	Buildout Assumption
Residential ¹	290 units ³
Nonresidential (Retail/Services/Restaurant) ²	200,000 gross square feet (gsf) ⁴
Notes: ¹ Includes residential mixed use, multi-family housing (including families, singles, workforce and seniors), and residential care facilities. ² Includes grocery market or specialty food sales (e.g., 3,500 gsf or less), other retail (clothing, art, home décor, flowers, books, etc.), personal services (daycare, dry cleaning, fitness, massage, pet grooming, etc.), business support services and offices, instructional services, medical services and visitor lodging, restaurant and café, and similar uses, and does not include large-box retail stores or regional retailer shopping centers. ³ Roughly equivalent to 16 units per acre based on 18 acres of developable land. ⁴ Roughly equivalent to 0.25 FAR based on 18 acres of developable land.	



Source: Census 2000 Data, The CaSIL

FIRSTCARBON
SOLUTIONS™



5 2.5 0 5
Miles

Exhibit 1 Regional Location Map

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Source: bing Aerial Imagery.

FIRSTCARBON
SOLUTIONS™



1,000 500 0 1,000
Feet

Exhibit 2 Local Vicinity Map Aerial Base

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An average of 1,500 gross square feet is assumed for the proposed residential units to account for a range of unit sizes. Thus, total planned building area of up to 435,000 gross square feet of residential and 200,000 gross square feet of nonresidential would constitute the anticipated 635,000-gross-square-foot development envelope. Development would be located on approximately 18 acres of the Comstock property and would include multi-story buildings up to 50 feet in height. Buildings near the rail right-of-way and Healdsburg Avenue frontage are anticipated to maintain lower heights of not more than 35 feet, with taller heights increasing toward the hillside portions of the plan area. The overall development footprint would allow for approximately 12 acres of open and undeveloped land to remain within the developable property.

The proposed plan land uses are consistent with the land use types established for the Mixed-Use zoning district.

Circulation and Access

Vehicle

Public vehicle access to the private mixed-use property within the plan area would be from Healdsburg Avenue via a single entry point just southwest of Passalacqua Road. The entry point would cross a railroad grade crossing that enables access to Healdsburg Avenue. In 2010, the City entered into an agreement with the property owners and the California Public Utilities Commission granted authority to convert the existing private crossing into a public crossing with improvements. The agreement is valid through October 23, 2018. If construction is not completed prior to the agreement's expiration, the property owner would need to secure a new crossing agreement. Surface parking would be required to be provide on-site to serve future development in the plan area. The plan will include recommendations for development of an internal street circulation system to serve development within the plan area. A secondary emergency vehicle access will be required to be obtained by the developer in order to achieve full buildout anticipated under the plan.

Rail

The plan area would not be serviced by rail.

Bicycle and Pedestrian

The proposed plan would promote the City's efforts to maximize bicycle and pedestrian connections to the existing bicycle and pedestrian system. Complementary to the City's Complete Streets program, the proposed plan would incorporate connections to the Foss Creek Pathway, Foss Creek Trail, and the City's sidewalk system.

Infrastructure

Water and Wastewater

The City of Healdsburg owns and operates sewage collection, treatment, and disposal facilities that would serve the plan area. The City's wastewater treatment plant (WWTP) is located approximately one mile southwest of the city limits, on Foreman Lane just south of the confluence of Dry Creek and the Russian River. The City of Healdsburg's water system is supplied from three well fields: one on Dry Creek with three operational wells and two on the Russian River with eight operational wells. The plan

area is located within the City's water and wastewater service areas. Future proposed land use development projects would connect to existing infrastructure located beneath Healdsburg Avenue.

Stormwater

The plan area would have a private on-site drainage system. The drainage system would be a combination of an existing drainage swale around the perimeter of the plan area and a storm drain system that would collect stormwater from paved surfaces on-site. The system will be a combination of the existing system and other methods to meet State Water Quality standards.

Electricity

Existing electric utility poles along the west side of Healdsburg Avenue would be undergrounded as development occurs. The City will provide electric service by connecting to existing facilities within Healdsburg Avenue and coordinated with Saggio Hills Joint Trench Plan prepared by Nor-Coast Utility Design. Utility lines within the plan area would be installed underground. Existing services would be upgraded and replaced as part of the proposed development and coordinated with the Montage Healdsburg development public improvement plans.

Natural Gas

The plan area currently has public utility services including gas service provided by Pacific Gas & Electric. Future development would connect to an existing gas line beneath Healdsburg Avenue. Existing services would be upgraded and replaced as part of the proposed development and coordinated with the Montage Healdsburg development public improvement plan.

Landscaping, Signage, and Lighting

Landscaping

Landscaping elements would be compatible with the design, scale, and placement of buildings as well as the surrounding area, based upon the historic agricultural and rural character of the north entry area. The plan area would also include a 35-foot landscaping easement along Healdsburg Avenue that is consistent or compliments the proposed landscaping along the east side of Healdsburg Avenue associated with the Saggio Hills Area Plan.

Signage

Site signage throughout the plan area would be provided in compliance with City ordinances and design guidelines in the proposed plan.

Lighting

Exterior site lighting throughout the plan area would provide for safety and security to residents, visitors, and employees. Lighting will comply with City ordinances and night sky requirements.

Phasing and Construction

Construction of future land use development projects is expected to occur over an estimated 12-month period. Construction activities would include typical phases such as site preparation and grading, building construction, paving and architectural coating. For the purposes of this Initial Study, construction is conservatively assumed to begin in January 2020 and be completed in January 2021.

1.6 - Cumulative Projects

Buildout of the 2030 General Plan (adopted 2009) identified a citywide potential for construction of up to 872 additional residential units, including approximately 578 single-family units, 241 multi-family units, industrial development of 995,975 square feet, 339 hotel rooms, and 52 mixed use units.¹ Based on the General Plan, population would increase from 12,200 (2005) to 14,468 at buildout, assuming all 872 residential units are constructed and occupied. The General Plan buildout also includes commercial, retail, mixed use, and office space (507,508 square feet, 551,683 square feet, 15,000 square feet, and 20,000 square feet, respectively, or 1,014,111 square feet total).

1.7 - Required Approvals

The following discretionary actions are required by the Healdsburg City Council for approval of the proposed North Entry Area Plan:

- EIR Certification
- Adoption (by resolution) of North Entry Area Plan General Plan Amendment
- Approval of Zoning Code amendments (if any) necessary to conform to the General Plan Amendment

Subsequent development of the Comstock property would be required to comply with the proposed plan. Development of this property would include the following additional discretionary actions:

- Approval of Design Review and Conditional Use Permit entitlements from the City of Healdsburg.
- Approval of encroachment permits from the City of Healdsburg for utility infrastructure and public improvements.
- Installation of approved at-grade crossing improvements to provide public access for the property. An extension of time for installation of the crossing improvements may be required to be obtained from the CPUC and NCRA.
- Approval of a new emergency vehicle at-grade crossing from the CPUC and NCRA across the railroad, between Healdsburg Avenue and developable portion of the Comstock property.

1.8 - Intended Uses of this Document

This Initial Study has been prepared to determine the appropriate scope and level of detail required for completing the environmental review analysis of the proposed plan's EIR. This document will also serve as a basis for soliciting comments and input from members of the public and public agencies regarding the proposed plan. The City will circulate the Initial Study for a minimum of 30 days and hold a public scoping meeting on June 28, 2018. During the public period, comments concerning the analysis contained in the Initial Study should be sent to:

¹ City of Healdsburg General Plan Environmental Impact Report (SCH 2007082030), Section IV.J: Land Use and Planning, Table IV.J.3.

Maya DeRosa, Planning and Building Director
City of Healdsburg
Planning and Building Department
401 Grove Street
Healdsburg, CA 95448
Phone: 707.431.3346
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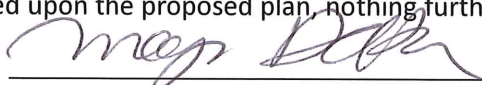
SECTION 2: ENVIRONMENTAL CHECKLIST AND ENVIRONMENTAL EVALUATION

Environmental Factors Potentially Affected					
The environmental factors checked below would be potentially affected by the proposed plan, involving at least one impact that is a "Potentially Significant Impact" and not also already identified as mitigable as indicated by the checklist on the following pages.					
☒	Aesthetics	☐	Agriculture and Forestry Resources	☒	Air Quality
☐	Biological Resources	☐	Cultural Resources	☐	Geology and Soils
☒	Greenhouse Gas Emissions	☐	Hazards and Hazardous Materials	☐	Hydrology and Water Quality
☐	Land Use and Planning	☐	Mineral Resources	☒	Noise
☐	Population and Housing	☐	Public Services	☐	Recreation
☒	Transportation/Traffic	☐	Utilities and Services Systems	☐	Mandatory Findings of Significance

Environmental Determination

On the basis of this initial evaluation:

- ☐ I find that the proposed plan COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☐ I find that although the proposed plan 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 plan MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed plan 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 measure 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 plan 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 plan, nothing further is required.

Date: 6/21/18 Signed: 

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
1. Aesthetics <i>Would the project:</i>				
a) Have a substantial adverse effect on a scenic vista?	☒	☐	☐	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☒	☐	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☒	☐	☐	☐

Existing Conditions

Primary scenic vistas within the City area consist of wooded ridges, hillsides, and the Russian River². The City has designated several ridgelines in the General Plan as scenic resources. Specifically, Fitch Mountain, to the east of the plan area, is a scenic resource. Another scenic resource, the Russian River, is primarily visible from bridges and parks that front the river, and river views are relatively limited within the City. The City and Sonoma County have designated the portion of U.S. Highway 101 in the surrounding area, located approximately 140 feet west of the plan area, as a scenic corridor³. The City has also designated Healdsburg Avenue as scenic corridor.⁴

In the CEQA context, light is nighttime illumination that stimulates sight and makes things visible, and glare is difficulty seeing in the presence of bright light such as direct or reflected sunlight. The primary sources of nighttime light in the surrounding area are from vehicle headlights traveling along U.S. Highway 101, Healdsburg Avenue, and other surrounding roadways. There are minimal streetlights along these proximate roadway corridors and few buildings with outdoor security lighting in the surrounding area. In addition, there are no large reflective surfaces associated with buildings in the surrounding area that contribute daytime glare within the plan area.

² City of Healdsburg General Plan 2030, IV.B-1.

³ City of Healdsburg General Plan 2030. NR-C-7.

⁴ *Ibid.*

Environmental Evaluation

Would the project:

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

Potentially significant impact. The plan area is composed of mainly flat areas rising slightly to the northwest. The plan area is located near Healdsburg scenic resources (two major scenic ridgelines located to the east of the plan area) and bordered by two scenic roadways U.S. Highway 101 on the west and Healdsburg Avenue on the east. In addition, a portion of Healdsburg Avenue is located within the plan area. The proposed plan would include a range of new land uses with varying building heights. Implementation of the proposed plan would alter the character of existing scenic vistas available from publicly accessible locations.

General Plan goals and policies related to scenic vistas provide direction on how future development should account for the City's scenic resources. The proposed plan would provide guidance for development of the plan area in accordance with the applicable land use policies and standards. Policy NR-C-7 provides that viewsheds along scenic highways, roads, and streets shall be protected and enhanced. In addition, Policies LU-A-6, LU-C-1, T-A-14, PS-H-7, NR-B-2, and NR-C-1 through NR-C-6 apply to ensure that land use respects natural constraints and conditions, future development projects are aesthetically pleasing, open space and natural settings are protected and enhanced, and scenic resources are protected from obstruction from development by requiring a visibility analysis for new development. This would include new development along the following roadway segments, declared as scenic roads by Policy NR-C-7, for purposes of General Plan and City land use regulations:

- U.S. Highway 101—entire length within the plan area
- Healdsburg Avenue—North of Grove Street

Buildout under the proposed plan could obscure important sightlines from scenic roads (U.S. Highway 101 and Healdsburg Avenue) to scenic resources (Fitch Mountain as well as other hillsides and wooded ridges) by adding new buildings, landscaping, and signs adjacent to these scenic roads. This is a potentially significant scenic vistas impact and, thus, will be further evaluated in the EIR.

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

No impact. According to the California Department of Transportation (Caltrans) Scenic Highway Mapping System,⁵ there are no officially State-designated or eligible scenic highways within the City limits. Therefore, no impact would occur with regard to scenic resources within a State scenic highway, and such impacts will not be addressed further in the EIR.

⁵ California Department of Transportation (Caltrans). 2018. California Scenic Highway Mapping System. Website: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm. Accessed: March 29.

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

Potentially significant impact. The plan area is visible from U.S. Highway 101, a City- and County-designated scenic corridor. Looking towards the plan area from U.S. Highway 101, the existing area provides northbound drivers with a clear view down to the plan area and surrounding areas. The plan area is located along Healdsburg Avenue and has a sense of enclosure on three sides because of a steep grassland/woodland hillside to the north, an approximate 45-foot-high embankment to the west, and moderately sloped hillsides to the south.

The General Plan EIR examined the potential for allowable development to degrade the City's visual character. General Plan policies and the City's zoning ordinance would apply to new development in order to reduce impacts. Policies T-A-2, PS-H-7, NR-B-2, NR-B-6, and NR-C-1 through NR-C-8 will protect the City's open space, natural and scenic resources, viewsheds from City-designated scenic roadways, and mature trees from development and encroachment, and require new development to plant large-scale trees to match the surrounding landscape. In addition, General Plan policies LU-A-1 and LU-C-1 ensure that developments respect natural constraints and conditions within the city limit/Urban Growth Boundary. Article 26 of the City's Zoning Ordinance not only promotes the maintenance of the City's natural resources through design review of proposed developments, but also requires that developments adhere to all applicable policies and standards found in the City's General Plan and Zoning Ordinance.

The plan area is currently undeveloped and the developable area is comprised largely of a flat graded area. The proposed plan includes multistory building components between U.S. Highway 101 and Healdsburg Avenue. The existing visual character of the plan area would change, altering the visual experience of travelers along these scenic corridors in northern Healdsburg. This is a potentially significant visual character impact and thus will be further evaluated in the EIR.

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

Potentially significant impact. The plan area is located in an undeveloped portion of the City. Residential and commercial development in accordance with the proposed plan would potentially result in significant new sources of light and glare affecting daytime and nighttime views. The plan area is located within an area (the "North Entry Study Area"⁶) for which the City General Plan requires development of a further plan. The General Plan requires that such a plan identify street improvements along the northern portion of Healdsburg Avenue, including lighting.

The proposed plan contemplates the construction of new buildings, and, as such, new sources of lighting would be created. Redevelopment of the plan area with large and tall buildings would also introduce new sources of glare in the form of reflective glass and metal elements. Additional light and glare could also result from increased automobile headlights generated by increased roadway traffic. Consequently, the effect of new sources of lighting and glare is a potentially significant impact and thus will be further evaluated in the EIR.

⁶ City of Healdsburg General Plan 2030. 2 Land Use page: 2-11.

Mitigation Measures

No mitigation measures have been identified at this time. Impacts associated with this topic will be further evaluated and, if necessary, mitigated in the EIR.

Cumulative Impacts

As previously noted in Section 1.6, the anticipated cumulative buildout under the General Plan could result in the construction and operation of up to 872 additional residential units, 52 mixed-use units, 339 hotel rooms, 995,975 gross square feet of industrial uses, 507,508 gross square feet of commercial space, 551,683 gross square feet of retail space, 15,000 gross square feet of mixed-use space, and 20,000 gross square feet of office uses within the City of Healdsburg. As such, implementation of the aforementioned identified cumulative projects in combination with the proposed plan could result in significant impacts on a scenic vista, existing visual character, and light and glare. Adherence to General Plan goals and policies related to scenic vistas as well as implementation of project-specific design recommendations in the proposed plan would reduce potential aesthetics impacts, however, this cumulative topic will be further evaluated in the EIR.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
2. Agriculture and Forestry Resources <i>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:</i>				
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?	☐	☐	☒	☐

Existing Conditions

The plan area is adjacent to U.S. Highway 101 and residential development to the south and east. The area surrounding the plan area is mapped by the California Department of Conservation Farmland Mapping and Monitoring Program as largely "Other Land" or "Grazing Land." A small area immediately to the northeast of the plan area (across Healdsburg Avenue) is mapped "Farmland of Statewide Importance" and "Unique Farmland" as well as an area to the west (across Highway 101) mapped as "Unique Farmland."

The plan area is not in agricultural use and is mapped by the California Department of Conservation Farmland Mapping and Monitoring Program as “Urban and Built-Up Land.” In addition, the plan area does not contain forested land and is designated “Mixed Use” by the Healdsburg General Plan.

Environmental Evaluation

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?**

No impact. The California Department of Conservation Farmland Mapping and Monitoring Program mapped the plan area as “Urban and Built-Up Land,” which is a non-agricultural land use designation. Thus, future development within the proposed plan area would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. No impact would occur. This topic will not be further addressed in the EIR.

- b) **Conflict with existing zoning for agricultural use, or a Williamson Act contract?**

No impact. The plan area consists of parcels that are designated Mixed Use land use by the General Plan, which is a non-agricultural zoning designation and considered not suitable or appropriate for primary agricultural activities. Additionally, the land within the plan area is not in agricultural use and, therefore, not encumbered by a Williamson Act contract. These conditions preclude the possibility of conflicts with agricultural zoning or a Williamson Act contract. No impact would occur. This topic will not be further addressed in the EIR.

- 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))?**

No impact. The plan area is designated Mixed Use, which is a non-forest zoning designation. Additionally, the plan area does not contain forest or timberland. These conditions preclude the possibility of conflicts with forest or timberland zoning. No impact would occur. This topic will not be further addressed in the EIR.

- d) **Result in the loss of forestland or conversion of forest land to non-forest use?**

No Impact. The proposed plan area does not contain any forestland. This precludes the possibility of the loss of forestland. No impact would occur. This topic will not be further addressed in the EIR.

- 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?**

Less than significant impact. As discussed above, the plan area does not contain, nor is located adjacent to, forested land. Even though the plan area is adjacent to various farmlands, the proposed

plan would not result in conversion of farmland to non-agricultural use or conversion of forestland to non-forest use. Impacts would be less than significant. This topic will not be further addressed in the EIR.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

As previously noted in Section 1.6, the anticipated cumulative buildout under the General Plan could result in the construction and operation of up to 872 additional residential units, 52 mixed-use units, 339 hotel rooms, 995,975 gross square feet of industrial uses, 507,508 gross square feet of commercial space, 551,683 gross square feet of retail space, 15,000 gross square feet of mixed-use space, and 20,000 gross square feet of office uses within the City of Healdsburg. Implementation of the aforementioned cumulative development in combination with the proposed plan would not result in development on “Farmland of Statewide Importance,” “Unique Farmland,” “Unique Farmland,” or within forested areas. Thus, the cumulative agriculture and forestry resources impact would be less than significant. This cumulative topic will not be further evaluated in the EIR.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
3. Air Quality <i>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.</i> <i>Would the project:</i>				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☒	☐	☐	☐
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)?	☒	☐	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Existing Conditions

The plan area is located within the North Coast Air Basin, where air quality is regulated by the North Sonoma County Air Pollution Control District (NSAPCD). Given that the proposed plan area is currently vacant, no stationary air pollutant emission sources exist within the plan area. However, vehicles traveling along Healdsburg Avenue represent mobile air pollutant sources.

Environmental Evaluation

Would the project:

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

No impact. The plan area is located in the North Coast Air Basin, where air quality is regulated by the NSAPCD. The Air Basin is in attainment for all federal and State ambient air quality standards, except for the State 24-hour particulate (PM₁₀) standard, which is only in violation within Humboldt County and regulated by the North Coast Unified Air Quality Management District. Therefore, the NSAPCD is not required to prepare or implement an air quality plan. No impact would occur. This topic will not be further evaluated in the EIR.

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

Potentially significant impact. This impact relates to localized criteria pollutant impacts. Potential localized impacts would be exceedances of State and federal ambient air quality standards. The plan area consists of vacant land, and the proposed plan would redevelop the plan area with a mix of residential and commercial uses. Based on the proposed plan components and related traffic generation, the proposed plan would generate air pollutants that could exceed air quality standards for short-term construction and long-term operational activities. Guidance provided by NSAPCD suggests that lead agencies use thresholds prepared by the Bay Area Air Quality Management District (BAAQMD). Buildout associated with implementation of the proposed plan could generate criteria pollutant emissions that exceed BAAQMD significance thresholds. This is a potentially significant impact and thus 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 non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?

Potentially significant impact. For the reasons noted above in impact 3b), implementation of the proposed plan would generate criteria pollutant emissions that could exceed BAAQMD significance thresholds. This is a potentially significant impact and thus will be further evaluated in the EIR.

d) Expose sensitive receptors to substantial pollutant concentrations?

Potentially significant impact. The proposed plan would redevelop a vacant site with residential and commercial uses. Development of the plan area with urban uses could create toxic air contaminant (TAC) emissions from a variety of stationary (non-vehicular) sources such as evaporative emissions from paints, cleaning products, emergency back-up generators, etc. In addition, proposed land uses could create new TAC emissions from construction activities and construction- and operational-related vehicular trips. This is a potentially significant impact and thus will be further evaluated in the EIR.

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

Less than significant impact. Odors can cause a variety of responses. The impact of an odor often results from interacting factors such as frequency (how often), intensity (strength), duration (time), offensiveness (unpleasantness), location, and sensory perception.

The proposed plan would redevelop a vacant site with residential and commercial uses. Diesel exhaust and volatile organic compounds (VOCs) would be emitted during construction of the proposed plan resulting from heavy-duty construction equipment and asphalt paving activities, both of which could be objectionable odors to some populations. However, emissions would disperse rapidly from the site and construction activities would be relatively low in intensity as well as short-term in nature. Therefore, it is not anticipated that construction-related activities would create objectionable odors affecting a substantial number of people. As such, construction odor impacts would be less than significant.

Land uses typically associated with odors include wastewater treatment facilities, waste-disposal facilities, or agricultural operations. The proposed plan's residential and commercial uses are not land uses typically associated with the emission of objectionable odors. During operation of proposed plan land uses, odors could be emitted from vehicles traveling to and from the site; however, these occurrences would not produce a substantial amount of odors and related emissions would be dispersed among the local roadway network. The two potential odor sources known to exist within the City, the Healdsburg Landfill and the Healdsburg Transfer Station, are both located well beyond the one-mile screening distance for potential odor impacts. Therefore, the proposed plan would not place sensitive receptors near a location of substantial objectionable odor, and operational odor impacts would be less than significant. This topic will not be further evaluated in the EIR.

Mitigation Measures

No mitigation measures have been identified at this time. Impacts associated with this topic will be further evaluated and, if necessary, mitigated in the EIR.

Cumulative Impacts

As previously noted in Section 1.6, the anticipated cumulative buildout under the General Plan could result in the construction and operation of up to 872 additional residential units, 52 mixed-use units, 339 hotel rooms, 995,975 gross square feet of industrial uses, 507,508 gross square feet of commercial space, 551,683 gross square feet of retail space, 15,000 gross square feet of mixed-use space, and 20,000 gross square feet of office uses within the City of Healdsburg. As such, implementation of identified cumulative projects in combination with buildout under the proposed plan would result in cumulative emissions of criteria pollutants and toxic air contaminants, which could in turn result in significant cumulative air pollution and exposure of persons to such pollution and emissions. This is a potentially significant cumulative air quality impact and, thus, will be further evaluated in the EIR.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
4. Biological Resources <i>Would the project:</i>				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game 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 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?	☐	☐	☐	☒

Existing Conditions

The proposed plan area contains native annual grassland, typical of roadside areas in Sonoma County. The majority of the plan area currently consists of engineered fill and is devoid of significant vegetation; however, the plan area does contain trees. The plan area does not include any heritage trees with a diameter of 30 inches or more measured 2 feet above ground level or any types of habitat identified as biologically unique and of limited distribution, such as serpentine chaparral, serpentine grassland or native grassland. In addition, the plan area does not include native resident or migratory wildlife corridors or native wildlife nursery sites.

The proposed plan area contains limited riparian habitat. Seasonal drainage ditches extend across the western portion of the plan area as well as between the railroad tracks and Healdsburg Avenue. Drainage ditches and marginal areas provide some habitat for native and non-native plants. Some reaches of the main drainage ditch along the western side of the area have emergent vegetation dominated by cattails and other areas have woody vegetation dominated by willows, cottonwood, and coast live oak. Annual grassland habitat is present along the smaller ditches, dominated by ryegrass and tall flat sedge. Much of the seasonal wetland habitat occurs along the lower banks of the ditches. The plan area includes two existing 48-inch- and 36-inch-diameter culverts that convey stormwater in drainage ditches along each side of the railroad tracks. Other areas with seasonal wetland habitat include the southwest corner of the site and a sliver of land between the railroad tracks and Healdsburg Avenue.

The General Plan EIR identified four special-status fish species that are known to occur within the Healdsburg area within the Russian River. This includes: Coho salmon—Central California Coast ESU (*Oncorhynchus kisutch*), Navarro roach (*Lavinia symmetricus navarroensis*), and Russian River tule perch (*Hysterothorax traski pomis*). The General Plan EIR notes that Foss Creek may also support California freshwater shrimp (*Syncaeris pacifica*), a federal- and State-listed endangered species.

Information in this section is based upon results of CDFW's California Natural Diversity Database (CNDDDB), California Native Plant Society (CNPS) inventory of rare and endangered plants, and the United States Fish and Wildlife Service (USFWS) database searches (included in Appendix A).

FirstCarbon Solutions (FCS) completed a review of the original environmental documentation from 2004 and prior, focusing on potential onsite biological resources that were identified and if proposed mitigation measures appropriately reduce potential impacts pursuant to CEQA (see Appendix A5). Prior to conducting a field survey for the purpose of the review, FCS biologists reviewed aerial photos, topographic maps, and previous documentation. A literature and database review was conducted which included the California Department of Fish and Wildlife's (CDFW's) California Natural Diversity Database (CNDDDB) (CDFW 2018; the California Native Plant Society's (CNPS's) Inventory of Rare and Endangered Plants (CNPS 2018); the Healdsburg USGS 7.5-minute quadrangle map (1980); and other technical databases and resource agency reports, in order to assess the current distribution of special-status species and habitats in the vicinity of the plan area.

An FCS biologist visited the site in late spring 2018 to verify the validity of the existing documentation and identify any potentially occurring species or habitats. Specifically, the purpose of this reconnaissance-level field survey was to obtain an overview of the existing habitat conditions within the plan area and the potential of supporting special-status wildlife and plant species, wetlands, critical habitat, wildlife movement, and other potentially jurisdictional features to provide a basis for the CEQA analysis.

Environmental Evaluation

Would the project:

- a) **Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?**

Less than significant impact with mitigation incorporated. The developable land in the plan area underwent mass grading in preparation for redevelopment in 2004. This area currently consists of engineered fill. The area does contain non-native annual grassland, typical of roadside areas in Sonoma County.

Special-species plant and wildlife species typically occur in undeveloped areas. Although less likely, it is also possible for them to occur within developed areas. The plan area, in part, has characteristics of land that has been developed or disturbed, including disturbed soils and the presence of invasive and non-native plant species on-site.

Implementation of federal, State, and local regulations and the proposed General Plan policies and implementation measures designed to protect plants and animals and their habitats would reduce impacts related to candidate, sensitive, or special-status species. General Plan policies LU-C-1, LUC-2, and NR-B-3 encourage the clustering of development in more urban areas to avoid impacts to habitat. Policy NR-B-5 (PS-H-7) seeks to protect and preserve areas of habitat by designating those areas as permanent open space. Chapter 20.24, Article III, Section 20.24.085 et. seq., of the City's Zoning Ordinance includes riparian setback requirements for new development. Policy NR-B-1 requires that "Channel improvements to, and tree and brush clearance activities along Foss Creek shall not unnecessarily disturb riparian vegetation." Policy NR-2 requires the proposed plan continue to enforce the riparian setback requirements of the Zoning Ordinance. In addition, Policy NR-B-2 requires the protection of large, mature trees that contribute to the visual quality of the environment or provide important wildlife habitat.

A special-status wildlife habitat assessment report was prepared for the plan area in support of the 2004 regrading Initial Study. The report confirmed that several special-status vertebrate species inhabit the region or historically occurred in the area. The report determined that most of these species are not expected in the plan area because of extensive habitat modification and fragmentation in the area, high levels of human activity, and a lack of recent local recorded sightings.

However, intact wildlife habitats exist to the north and south of the site. The habitats may support special-status species and may occur on-site on an infrequent basis (migration or dispersal). In order to ensure potential impacts will be reduced to less than significant levels, and as recommended in the assessment, Mitigation Measure (MM) BIO-1 shall be incorporated in the plan to reduce impacts to less than significant. This topic will not be further addressed in the EIR.

- b) **Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?**

Less than significant impact. The Comstock property was cleared of all structures and regraded to provide a level area for development, with sloped hillsides remaining along the western and northern boundaries. The City prepared an Initial Study for the plan area regrading and demolition plan which is dated January 6, 2004.⁷ The Initial Study included an arborist report, streambed alteration agreement, wetland mitigation plan, and cultural resources survey. Site regrading resulted in loss of 0.17 acre of waters of the United States and 0.19 acre of seasonal wetland. A revegetation program for wetland mitigation was completed in 2009.⁸ The program included creation of 0.43 acre of waters of the United States excavated on upland property and establishment of 0.20 acre of seasonal wetland within a constructed drainage channel.

The plans for regrading included drainage designed to sheet flow in a southeasterly direction towards a drainage ditch along the eastern side of the plan area parallel to the NCRA train track. The wetland mitigation plan also included details for planting and grading to reduce bank erosion. Currently, drainage flows into a 0.7-acre stormwater detention basin at the southern end of the plan area, which filters out sediments and contaminants to improve water quality runoff into Foss Creek. All work was completed in compliance with local and state permitting requirements.

As discussed above, the plan area contains seasonal drainage ditches across the western portion of the site as well as between the railroad tracks and Healdsburg Avenue. According to an Initial Study/Mitigated Negative Declaration (IS/MND) prepared in 2004 for the regrading of the site and reconstruction of on-site drainage, the areas are federally regulated under Section 404 of the Clean Water Act. As required by the 2004 IS/MND, and a permit issued by the United States Army Corps of Engineers (USACE), mitigation planting for the plan area regrading impacts to wetland and riparian habitat was implemented in four drainage areas. The wetland and riparian habitat mitigation within areas of the proposed plan included annual and on-going monitoring to ensure success. The proposed area plan would ensure that development activities within the plan area would be located in the developable portions for the site only, avoid impacts on these mitigation plantings, and ensure their on-going functions and values.

Implementation of federal, State, and local regulations and General Plan policies that are designed to protect riparian (Policy PS-D-2; Policy NR-B-1; Policy NR-B-3; and Policy NR-C-6), oak woodland (Policy LU-C-2; Policy NR-B-2; Policy NR-B-3; Policy NR-C-6; and Policy CD-A-7), wetlands (Policy NR-C-6), and other sensitive habitats (Policy LU-C-2; Policy NR-B-1; Policy NR-B-3; Policy NR-B-5; Policy NR-C-4; and Policy NR-C-6) would ensure that impacts related to these habitats or other sensitive communities are less than significant. Future development would be subject to Design Review, which includes a review for compliance with the area plan and the General Plan policies referenced above. The area plan would include an implementation section discussing compliance with the applicable policies and required entitlements. This topic will not be further addressed in the EIR.

⁷ Initial Study Regrading and Demolition Plan for 32-Acre Site Located at 16977 Healdsburg Avenue, January 6, 2004.

⁸ Quaker Hill-32 Revegetation Program for Final Wetland Mitigation Plan 2009 Final Monitoring Report.

- 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?**

Less than significant impact with mitigation incorporated. The plan area contains drainage ditches and areas of seasonal wetlands. As identified in the Initial Study/Mitigated Negative Declaration (IS/MND) prepared in 2004 for the regrading of the plan area and reconstruction of on-site drainage, the on-site drainage ditch areas that may contain seasonal wetlands areas are federally regulated under Section 404 of the Clean Water Act. As required by the 2004 IS/MND, and a permit issued by the USACE, mitigation planting for the plan area regrading impacts to wetland and riparian habitat was implemented in four drainage areas. The wetland and riparian habitat mitigation for the plan area grading project included annual and ongoing monitoring to ensure success. Consistent with the proposed plan, the City would conduct design review to ensure that future development is not sited in sensitive areas and construction activities would avoid impacting protected wetlands.

Construction activities have the potential to degrade water quality through the exposure of surface runoff as well as runoff from construction equipment. Construction activities typically include the refueling of construction equipment on location. As a result, minor fuel and oil spills may occur with a risk of larger releases. Without rapid containment and cleanup, these materials could be potentially toxic, depending on the location of the spill in proximity to water features. Accidental spills within the plan area work sites and into the on-site drainage ditches could result in adverse impacts to aquatic environments. Applicants for land use entitlements within a wetland area shall be required to submit a formal wetland jurisdictional delineation conducted by a qualified wetlands expert familiar with the requirements of the USACE. Development within this proposed plan shall comply with USACE requirements pursuant to Section 404 of the Clean Water Act and would potentially result in a substantial adverse effect on federal- and State-protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means. This is a potentially significant impact. However, implementation of MM BIO-2 would reduce impacts to Section 404-protected wetlands to less than significant. This topic will not be further addressed in the EIR.

- 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 wildlife nursery sites?**

Less than significant impact. The plan area previously supported a lumberyard and mill operations on the Comstock property. In 2004, the plan area underwent mass grading in preparation for redevelopment. The plan area does not include native resident or migratory wildlife corridors or native wildlife nursery sites. The plan area does not contain spawning habitat and unlikely to support a juvenile fish population. The plan area contains poor and seasonal rearing habitat, and access to the site for juvenile fish precluded by a 4-foot drop from the culvert under the railroad tracks.

The regrading and drainage improvements conducted in 2004 were anticipated to improve habitat quality in downstream anadromous salmonid habitat. Given the plan area's proximity to Foss Creek, a tributary of the Russian River, a salmonid habitat suitability assessment was conducted in 2003

and incorporated into the IS/MND for the proposed regrading project. Based on that assessment, the 2004 IS/MND concluded that Foss Creek has very limited steelhead resources and that the plan area does not support salmonids. Aquatic habitat within the slough are similarly unsuitable for salmonid rearing habitat even if access was possible. Furthermore, seasonal surface flow and aquatic habitat is characterized as marsh with standing water and emergent vegetation.

Changes in water quality relative to downstream habitat from the plan area are anticipated to be beneficial to steelhead habitat. Construction would relocate and improve site drainage and capture runoff to avoid water quality impacts. In addition, the proposed plan would improve sloping and anticipated to improve water quality of runoff from the plan area. Therefore, the previous site-regrading and drainage improvements are anticipated to improve stormwater quality runoff and habitat quality in downstream anadromous salmonid habitat.

Suitable freshwater habitat is identified in areas downstream of sub-area A. However, the plan area is located in the northern section of the City, in sub-area D, and thus is not likely to impact habitat. In addition, the City would ensure compliance with the federal and State regulations related to the protection of migratory fish and wildlife species along with confirmation of compliance with the General Plan policies that protect biological resources (Policy PS-D-2; Policy NR-2; Policy S-C-3) at the time of formal entitlement review. This would reduce impacts to less than significant. This topic will not be further addressed in the EIR.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No impact. The City protects “heritage trees,” defined in Article 18, Section 18105 of the City’s Zoning Ordinance, as any tree with a diameter of 30 inches measured 2 feet above ground level. The plan area consists of flat ground and is largely devoid of vegetation. Mass grading activities occurred to prepare the area for redevelopment in 2003. The plan area does not include any heritage trees or any types of habitat identified as biologically unique and of limited distribution, such as serpentine chaparral, serpentine grassland, or native grassland.

Pursuant to Title 20 of the Healdsburg Land Use Code, Chapter 20.24 (“Environmental and Historic Resources Protection”), future land use development contemplated by the proposed plan would be required to comply with various regulations and policies aimed at protecting and preserving biological resources. The City would ensure compliance with General Plan policies and Land Use Code requirements for environmental resource protections during the entitlement phase of future development projects. While the proposed plan does not propose to remove trees, all tree removal would be required to comply with the applicable provisions of the Municipal Code. Title 20, Chapter 20.24.085, et. seq., of the City’s Zoning Ordinance includes riparian setback requirements for new development. Setbacks apply to any structure or other form of development located on property adjacent to or near Foss Creek, or other stream or creek, except as provided in the zoning ordinance. The requirements of this ordinance do not apply to public streets or utilities, flood control facilities, erosion control structures or creek bank stabilization improvements that have been approved as required by governmental agencies having jurisdiction over them. General Plan Policy NR-2 also requires that the City “Continue to enforce the riparian setback requirements of the Zoning

Ordinance.” As discussed above, future development pursuant to the proposed plan would be required to comply with General Plan policies and Land use Code requirements aimed at protecting and preserving biological resources. Therefore, associated impacts are less than significant. This topic will not be further addressed in the EIR.

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 plan area is not located in an area covered by an adopted habitat conservation plan. As discussed above, future development pursuant to the proposed plan would be required to comply with General Plan policies aimed at protecting and preserving biological resources. Therefore, no impact would occur. This topic will not be further addressed in the EIR.

Mitigation Measures

MM BIO-1 Migratory Birds and Nesting Raptors

The following requirement shall be imposed as a condition of approval on all development within the proposed plan area: A pre-construction survey of the site shall be required in order to ensure that nesting raptors, loggerhead shrikes, and other nesting special-status birds are not nesting during project construction. Specifically, these measures shall include:

- If construction is proposed during the breeding/nesting season for local avian species (typically February 15 through August 31), a focused survey for active nests of migratory birds within and in the vicinity of the project plan shall be conducted by a qualified biologist. Two surveys will be conducted, at least one (1) week apart, with the second survey occurring no more than two (2) days prior to tree removal. If no active nests are found, tree removal or construction activities may proceed.
- If an active nest is located during pre-construction surveys, the United States Fish and Wildlife Service (USFWS) and/or the California Department of Fish and Wildlife (CDFW), as appropriate, shall be notified regarding the status of the nest. Furthermore, construction activities shall be restricted to avoid disturbance of the nest until it is abandoned or the biologist deems disturbance potential to be minimal. Restrictions may include establishment of exclusion zones or alteration of the construction schedule.

MM BIO-2 Federally Protected Wetlands

Prior to any specific project development approval or grading that may fill or otherwise encroach into potentially jurisdictional waters of the U.S., the project proponent shall conduct a delineation of waters of the U.S. to determine the extent of USACE, RWQCB, and CDFW potentially jurisdictional features that would be potentially impacted on-site. Any encroachment or fill in these USACE, RWQCB

and/or CDFW jurisdictional areas shall not occur unless a Section 404/Section 401 permit or Waste Discharge Requirement and/or Streambed Alteration Agreement, respectively, are acquired and the project proponent replaces the lost value of the jurisdictional area to the satisfaction of the resources agencies issuing the permits to ensure a no-net loss. If proposed development will encroach upon or fill any jurisdictional wetland areas, the applicant shall do the following:

- Apply for a Section 404 permit from the USACE concurrently or after verification of the wetland delineation by the USACE. Any wetlands that would be lost or disturbed shall be replaced or rehabilitated on a “no net loss” basis in accordance with the USACE mitigation guidelines. On-site creation of wetland habitat may be preferred to off-site mitigation. Habitat restoration, rehabilitation, and/or replacement shall be at a location and by methods agreeable to the USACE;
- Obtain a Section 401 water quality waiver of certification from the Regional Water Quality Control Board (RWQCB); and
- Obtain a Streambed Alteration Agreement with the CDFW.

If encroachment upon or fill of wetlands is proposed, as a condition of approval for all future development within the plan area, a mitigation plan shall be implemented that includes at least one of the following:

- Completion of an on-site Mitigation and Monitoring Plan that includes on-site creation/preservation of the wetlands and/or;
- Credits may be obtained at an approved mitigation bank.

Cumulative Impacts

As previously noted in Section 1.6, the anticipated cumulative buildout under the General Plan could result in the construction and operation of up to 872 additional residential units, 52 mixed-use units, 339 hotel rooms, 995,975 gross square feet of industrial uses, 507,508 gross square feet of commercial space, 551,683 gross square feet of retail space, 15,000 gross square feet of mixed-use space, and 20,000 gross square feet of office uses within the City of Healdsburg. As such, implementation of the aforementioned identified cumulative projects in combination with buildout pursuant to the proposed plan could result in cumulative adverse effects, either directly or through habitat modifications, to species identified as a candidate, sensitive, or special-status species or habitats identified as communities of special concern. However, with adherence to California Department of Fish and Game, U.S. Fish and Wildlife Service, and USACE regulations as well as project-specific biological study recommendations (i.e., mitigation measures) identified as cumulative projects and the proposed plan, the cumulative biological resources impact would be less than significant. This cumulative topic will not be further evaluated in the EIR.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
5. Cultural Resources <i>Would the project:</i>				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐
<i>Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:</i>				
e) 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	☐	☒	☐	☐
f) 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.	☐	☐	☐	☒

Existing Conditions

A lumberyard and mill operated within the proposed plan area at least as far back as the 1950s until 2000. The 2004 IS/MND considered the demolition and removal of all structures, foundations, and concrete surface areas within the plan area. The mill equipment and previous developments were removed in 2004, and improvements have since been completed within the plan area. Improvements included activities to remediate contaminated soils as well as to modify and improve existing site drainage features. No known historical, archeological, paleontological, or tribal resources exist within the plan area. In addition, no known burial sites exist within the plan area.

Information in this section is based upon results of the NWIC historical, archeological, and tribal resources database search and the UCMP paleontological resources database search (included in Appendix B).

Environmental Evaluation

Would the project:

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

Less than significant impact with mitigation incorporated. A cultural resources survey was conducted for the plan area in 2002. The survey consisted of archival research and a pedestrian survey of the site, neither of which identified any cultural resources within the plan area. An updated records search was requested from NWIC on April 4, 2018. The records search identified eight recorded cultural resources within 0.5 mile of the plan area, all of which are historic in nature, and all of which are located outside the plan area. The plan area is currently a vacant undeveloped lot and has been previously graded in preparation for redevelopment. As such, the likelihood of encountering undiscovered historic resources is considered low.

While unlikely, subsurface construction activities always have the potential to damage or destroy previously undiscovered cultural resources. Historic resources can include wood, stone, foundations, and other structural remains; debris-filled wells or privies; and deposits of wood, glass, ceramics, and other refuse. Accordingly, this would be a potentially significant impact. However, implementation of MM CUL-1 would reduce potential impacts to historic resources to a less than significant level. This topic will not be further addressed in the EIR.

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

Less than significant impact with mitigation incorporated. Mass earthwork grading is not anticipated given the plan area previously underwent site grading and drainage improvements. The majority of the plan area is covered with engineered fill that was placed during remedial grading operations in 2004. As discussed above, a cultural resources survey was conducted for the plan area in 2002. The survey consisted of archival research and a pedestrian survey of the plan area, both of which failed to identify any cultural resources within the plan area. An updated records search was requested from NWIC on April 4, 2018. The records search identified eight recorded cultural resources within 0.5 mile of the plan area boundaries, none of which are prehistoric in nature, and all of which are located outside the plan area. As such, the likelihood of encountering undiscovered prehistoric archaeological resources is considered low.

Development activities always have the potential to encounter undiscovered archaeological resources, however. Such resources could consist of but are not limited to stone, bone, wood, or shell artifacts or features, including hearths and structural elements. Accordingly, this would be a potentially significant impact. However, implementation of MM CUL-1 would reduce this potential impact to a less than significant. This topic will not be further evaluated in the EIR.

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

Less than significant impact with mitigation incorporated. On April 2, 2018, FCS consulting Paleontologist Kenneth Finger conducted a UCMP database search for potential paleontological resources within the plan area. The plan area, located on the geological map of Blake et al. (2002),⁹ consists of Quaternary alluvium (Qal) and sedimentary rock of the Great Valley Complex (KJgvs), both of which are potentially fossiliferous. The UCMP database lists 27 vertebrate fossil localities in Sonoma County. Of these, ten are late Pleistocene, five are Pliocene, 10 are Miocene, one is Holocene, and one is not assigned an age. No vertebrate fossils have been found within 10 miles of the plan area.

Mass earthwork grading is not anticipated given the plan area previously underwent site grading and drainage improvements. The majority of the plan area is covered with engineered fill that was placed during remedial grading operations in 2004 on the site. As such, the likelihood of encountering undiscovered paleontological resources during plan implementation is considered low.

While unlikely, there is always the possibility that ground-disturbing activities during construction may uncover previously unknown paleontological resources. Accordingly, this would be a potentially significant impact. However, implementation of MM CUL-2 would reduce this potential impact to a less than significant. This topic will not be further evaluated in the EIR.

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

Less than significant impact with mitigation incorporated. No human remains or cemeteries are known to exist within or near the plan area. However, there is always the possibility that subsurface construction activities associated with the proposed plan, such as trenching and grading, could potentially damage or destroy previously undiscovered human remains. Accordingly, this is a potentially significant impact. In the event of the accidental discovery or recognition of any human remains, CEQA Guidelines Section 15064.5; Health and Safety Code Section 7050.5; Public Resources Code Section 5097.94 and Section 5097.98 must be followed. In the unlikely event human remains are discovered, implementation of MM CUL-3 would reduce this potentially significant impact to less than significant. This topic will not be further evaluated in the EIR.

⁹ Blake, M.C., Graymer, R.W., and Stamski, R.E., 2002, Geologic map and map database of western Sonoma, northernmost Marin, and southernmost Mendocino counties. U.S. Geological Survey, Miscellaneous Field Studies Map MF-2402, scale 1:100,000.

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:

- e) **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)**

Less than significant impact with mitigation incorporated. A review of the California Register of Historical Resources, local registers of historic resources, and a records search conducted at the NWIC failed to identify any listed Tribal Cultural Resources (TCRs) that may be adversely affected by the proposed plan. On February 12, 2018, representatives from the City of Healdsburg reached out to four tribal representatives identified by the NAHC as having possible interest in consulting on the project pursuant to AB-52. No responses were received within the 30-day consultation period.

On April 10, 2018, a letter was sent to NAHC in an effort to determine whether any sacred sites are listed on its Sacred Lands File within the plan area. A response from the NAHC was received on April 16, 2018 indicating that the Sacred Lands File search indicated the presence of Native American cultural resources in the immediate project area, and that tribal representatives should be contacted for additional information. The NAHC included a list of four local tribal representatives available for consultation. To ensure that all Native American knowledge and potential prehistoric concerns about the project are addressed, a letter containing project information and requesting any additional information was sent to each tribal representative on April 19, 2018. No responses have been received to date, and no TCRs have been identified as having the potential to be adversely affected by the project. However, as a conservative analysis, this would be a potentially significant impact. Should undiscovered TCRs such as Native American artifacts or burials be encountered during project construction, implementation of MM CUL-1 and MM CUL-3 would ensure related impacts are reduced to less than significant. This topic will not be further evaluated in the EIR.

- f) **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.**

No impact. Tribal consultation efforts conducted by the City of Healdsburg in its capacity as lead agency pursuant to AB-52 failed to identify significant TCRs meeting the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. As such, no significant TCRs would be adversely affected by the proposed plan. This topic will not be further evaluated in the EIR.

Mitigation Measures

MM CUL-1 The following requirement shall be imposed as a condition of approval on all future development within the plan area: In the event a potentially significant cultural resource is encountered during subsurface earthwork activities, all construction activities within a 100-foot radius of the find shall cease and workers should avoid

altering the materials until a qualified archaeologist who meets the Secretary of Interior's Professional Qualification Standards for archaeology has evaluated the situation. The applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Any previously undiscovered resources found during construction activities shall be recorded on appropriate Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of CEQA criteria by a qualified archaeologist. Potentially significant cultural resources consist of but are not limited to stone, bone, glass, ceramics, fossils, wood, or shell artifacts, or features including hearths, structural remains, or historic dumpsites. If the resource is determined to be significant under CEQA, the qualified archaeologist shall prepare and implement a research design and archaeological data recovery plan that will capture those categories of data for which the site is significant in accordance with Section 15064.5 of the CEQA Guidelines. The archaeologist shall also perform appropriate technical analyses, prepare a comprehensive report complete with methods, results, and recommendations, and provide for the permanent curation or repatriation of the recovered resources in cooperation with the designated Most Likely Descendant (MLD) as needed. The report shall be submitted to the City of Healdsburg, the Northwest Information Center, and the State Historic Preservation Office (SHPO), if required. The plan shall be approved by the City of Healdsburg for review and approval prior to implementation, and the applicant shall adhere to the recommendations in the plan.

MM CUL-2

The following requirement shall be imposed as a condition of approval on all future development within the plan area: In the event that fossils or fossil-bearing deposits are discovered during construction activities, excavations within a 100-foot radius of the find shall be temporarily halted or diverted. The construction contractor shall notify a qualified paleontologist to examine the discovery. The applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The paleontologist shall document the discovery as needed in accordance with Society of Vertebrate Paleontology standards and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction activities are allowed to resume at the location of the find. If the applicant determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of construction activities on the discovery. The plan shall be submitted to the City of Healdsburg for review and approval prior to implementation, and the applicant shall adhere to the recommendations in the plan.

MM CUL-3

The following requirement shall be imposed as a condition of approval on all future development within the plan area: In the event of the accidental discovery or recognition of any human remains, CEQA Guidelines Section 15064.5; Health and Safety Code Section 7050.5; Public Resources Code Section 5097.94 and Section

5097.98 must be followed. If during the course of project development there is accidental discovery or recognition of any human remains, the following steps shall be taken:

1. There shall be no further excavation or disturbance within 100 feet of the remains until the County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the most likely descendant (MLD) of the deceased Native American. The MLD may make recommendations to the landowner or the person responsible for the excavation work within 48 hours, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98.
2. Where the following conditions occur, the landowner or his or her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendant or within the plan area in a location not subject to further subsurface disturbance:
 - The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission.
 - The descendant identified fails to make a recommendation.
 - The landowner or his authorized representative rejects the recommendation of the descendant, and mediation by the NAHC fails to provide measures acceptable to the landowner.

Additionally, California Public Resources Code Section 15064.5 requires the following relative to Native American Remains:

- When an initial study identifies the existence of, or the probable likelihood of, Native American remains within a project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code Section 5097.98. The applicant may develop a plan for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American Burials with the appropriate Native Americans as identified by the Native American Heritage Commission.

Cumulative Impacts

As previously noted in Section 1.6, the anticipated cumulative buildout under the General Plan could result in the construction and operation of up to 872 additional residential units, 52 mixed-use units, 339 hotel rooms, 995,975 gross square feet of industrial uses, 507,508 gross square feet of

commercial space, 551,683 gross square feet of retail space, 15,000 gross square feet of mixed-use space, and 20,000 gross square feet of office uses within the City of Healdsburg. As such, implementation of the aforementioned identified cumulative projects in combination with the proposed plan could result in adverse impacts to historic, prehistoric, paleontological, or tribal cultural resources. These projects, however, would be required to mitigate for impacts through compliance with applicable federal and state laws governing cultural resources. Given the low probability of significant cultural resources within the plan area and the comprehensiveness of mitigation measures that would apply to the proposed plan and identified cumulative projects in the vicinity, the cumulative cultural resources impact would be less than significant. This cumulative topic will not be further evaluated in the EIR.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
6. Geology and Soils <i>Would the project:</i>				
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.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

Existing Conditions

The plan area lies within a seismically active region that includes major active fault systems. A geotechnical report prepared for the plan area identified two previously unidentified strike-slip faults (predominant movement side-to-side with minor vertical displacement).¹⁰ The two faults are associated with the Healdsburg fault, which cross the northern and southern portions of the plan

¹⁰ Kleinfelder 2017. Geotechnical Investigation, Quaker Hills Property, Healdsburg, CA, September.

area. The major fault systems are capable of producing a maximum earthquake event of 6.9 (Richter Magnitude).

Soil liquefaction is a condition where saturated, granular soils undergo a substantial loss of strength and deformation due to pore pressure increase resulting from cyclic stress application induced by an earthquake. According to the General Plan EIR Liquefaction Hazard Locations Map, Figure IV.G-3, the central portion of the plan area may contain susceptible soils prone to liquefaction during or immediately following a seismic event. In addition, the plan area consists of flat ground with relatively gentle topography.

Information in this section is based upon results of the geotechnical report prepared specifically for the plan area (included in Appendix C).

Environmental Evaluation

Would the project:

- 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.**

Less than significant impact. Based on the plan area geotechnical report findings, the potential for ground surface rupture within the plan area is high along the two identified Healdsburg fault traces and moderate within a 50-foot zone on either side of the fault traces. The potential for ground rupture elsewhere on in the plan area is considered low. Future horizontal displacements in these areas could range from a few inches to possibly two feet during a moderate to major event centered in the area. However, since the proposed plan would not construct habitable structures within 200 feet of the faults, in compliance with the Alquist-Priolo Act, and would not expose people or structures to substantial adverse effects associated with fault rupture, this impact would be less than significant. This topic will not be further evaluated in the EIR.

- ii) **Strong seismic ground shaking?**

Less than significant impact. According to the plan area geotechnical report, major earthquakes generated by active faults can be expected to cause strong ground shaking. Strong ground shaking can also be expected from moderate to major earthquakes generated on other faults in the region, such as the Healdsburg/Rodgers Creek fault, (located 5.5 miles northeast of the site) and the San Andreas fault (located 20 miles southwest of the site). The intensity of future shaking will depend on the distance from the plan area to the earthquake focus, magnitude of the earthquake and the response of the underlying soil and bedrock. The proposed plan includes residential and nonresidential components that would be constructed to the most recent California Building Code standards. As such, buildout under the proposed plan would not expose people or structures to

substantial adverse effects associated with seismic ground shaking, and this impact would be less than significant. This topic will not be further evaluated in the EIR.

iii) Seismic-related ground failure, including liquefaction?

Less than significant impact. The plan area geotechnical report identified relatively shallow bedrock underlain with cohesive soils near the surface. The susceptibility to liquefaction within the plan area is, thus, considered to be low. The plan area geotechnical report further determined that the potential for other secondary seismic effects related to liquefaction, such as lateral spreading or lurching, is considered low. Therefore, impacts from seismic-related ground failure would be less than significant. This topic will not be further evaluated in the EIR.

iv) Landslides?

Less than significant impact. The plan area previously underwent site grading and drainage improvements, resulting in engineered fill placed during remedial grading operations in 2004 across the plan area. The plan area is bounded on three sides by a steep grassland/woodland hillside to the north, an approximate 45-foot-high embankment to the west, and moderately sloped hillsides to the south.

The General Plan identified sub-areas to accommodate potential new development throughout the City. The General Plan EIR examined those areas that coincide with the possible risk of landslides. The General Plan EIR those identified sub-areas, Figure IV.G-5, that experienced or prone to landslides. The plan area is located within sub-area D. The plan area has not experienced a landslide, and sub-area D is not located within an area highly prone to landslides.

The plan area geotechnical report evaluated the potential for landslides. As discussed above, the plan area largely consists of flat ground. The report determined that the potential for seismically induced slope failures is considered low within or immediately adjacent to the plan area. However, the report did identify a moderate potential for seismically induced slope failure in the southwest corner of the plan area. The report identified three relatively small landslides exist near that area of the plan areas. The slides area shallow (less than 10 feet thick) and limited in extent, the report notes that the slides do not pose a significant hazard to development. The landslides can be removed, if construction is proposed within 30 feet of the area, during future grading and/or reconstruction.

Consistent with General Plan policies LU-A-6, LU-C-1, LU-C-2, T-A-8, T-A-12, S-A-1, S-A-2, SA-3, S-B-1, and S-B-2 and local building code requirements, the City would ensure that future development projects would be constructed in accordance with geological limitations (Appendix C) and will be required to employ structurally sound building practices. Therefore, this is considered a less than significant impact. This topic will not be further evaluated in the EIR.

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

Less than significant impact. In 2003, a portion of the plan area was improved for redevelopment. Improvements consisted of cleanup of contaminated soil, grading, drainage, and wetland mitigation. The plan area was mass graded to establish positive sheet flow drainage toward Healdsburg Avenue,

and an on-site collection, retention, and a discharge drainage system was constructed to minimize soil erosion and improve water quality. The plan area geotechnical report identified the plan area as containing relatively shallow bedrock underlain and cohesive soils near the surface.

To minimize the potential risk of soil erosion during construction, the plan area would be subject to mandatory compliance with all California Building Code requirements. The plan area is relatively flat and prior grading activities would help to ensure no portions of the plan area would experience significant erosion or sediment transport through standard control practices. Therefore, less than significant impacts from erosion would result from buildout under the proposed plan. This topic will not be further evaluated in the EIR.

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. Mass grading was previously completed in 2004 and grading associated with the proposed plan would be minimal, consisting of mainly minor cuts and fills necessary for road improvements, parking areas, and building pads as well as site drainage.

The plan area's geotechnical report determined that the plan area is located on a relatively stable geologic unit. The plan area is covered by cohesive soils and underlain by relatively shallow bedrock. Construction activities associated with the proposed plan would include removal of vegetation, excavation, and grading. To minimize the potential risk of soil erosion during construction, construction activities would be subject to mandatory compliance with all California Building Code requirements. Given the plan area is relatively level, the geotechnical report did not identify areas experiencing significant erosion or sediment transports. In addition, any future development would be required to apply for a grading permit with the City as well as submit a Stormwater Pollution Prevention Plan (SWPPP) that would further address potential erosion risk. Therefore, impacts would be considered less than significant. This topic will not be further evaluated in the EIR.

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. According to the plan area geotechnical report, the principal geotechnical factors that may affect future development in the plan area are the presence of non-engineered fill, expansive soils, and bedrock, and local shallow (perched) groundwater. Based on the geotechnical report, the plan area contains upper native in-place alluvial soils, colluvial soils, and engineered fill soils. In general, these soil types are considered to have a moderately to high expansive potential. In addition, the report identified highly weathered serpentinite and areas of severely weathered shale, also considered to have a highly expansive potential.

In 2017, intermittent soil and rock samples were collected from the plan area and tested. The results indicate plasticity indices ranging from 20 to 33, and liquid limits ranging from 37 to 65. Based on the plasticity index results, the plan area has a medium to high expansion potential. The liquid limit results indicate that the plan area has a medium to very high expansion potential.

However, the findings of the geotechnical report included recommendations for proposed development within the plan area, which will be implemented by the applicant prior to constructing building foundations and undertaking earthwork. The City would review future development applications for consistency prior to issuance of building permits. This includes structural designs and other techniques to overcome shrink-swell effects. As such, the proposed plan would not expose people or structures to substantial adverse effects associated with expansive soils, and this impact would be less than significant. This topic will not be further evaluated in the EIR.

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

No Impact. Proposed development within the plan area would be connected to a public sanitary sewer system and maintained by the Municipal Utility Department, which services all of the City of Healdsburg. An existing 10-inch public sewer would be extended to the plan area from Healdsburg Avenue; no septic systems are proposed within the plan area. No impact would occur. This topic will not be further evaluated in the EIR.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

As previously noted in Section 1.6, the anticipated cumulative buildout under the General Plan could result in the construction and operation of up to 872 additional residential units, 52 mixed-use units, 339 hotel rooms, 995,975 gross square feet of industrial uses, 507,508 gross square feet of commercial space, 551,683 gross square feet of retail space, 15,000 gross square feet of mixed-use space, and 20,000 gross square feet of office uses within the City of Healdsburg. As such, implementation of the aforementioned identified cumulative projects in combination with the proposed plan could result in cumulative placement of persons and structures on or proximate to earthquake faults and unstable soils, which could in turn result in cumulative exposure of persons or structures to seismic-related geotechnical hazards and soil erosion/failure. However, with adherence to California Building Code requirements and the Alquist-Priolo Act (preventing placement of habitable structures within 200 feet of an earthquake fault) as well as project-specific geotechnical study recommendations (i.e., mitigation measures) by project proponents for the identified cumulative projects and the proposed plan, the cumulative geology/soils impact would be less than significant. This cumulative topic will not be further evaluated in the EIR.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
7. Greenhouse Gas Emissions <i>Would the project:</i>				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐	☐	☐
c) Encourage activities that result in the use of large amounts of energy, or use of energy in a wasteful manner? ¹¹	☒	☐	☐	☐

Existing Conditions

The plan area is located within the NSAPCD. Given that the plan area is currently vacant, no greenhouse gas (GHG) emissions are currently generated and no energy (renewable or non-renewable) is currently consumed within the plan area.

Environmental Evaluation

Would the project:

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

Potentially significant impact. The NSAPCD has not adopted standards of significance for construction and operational activities and instead recommends the use of the BAAQMD's thresholds and mitigation measures. The thresholds established by BAAQMD for project-level operational greenhouse gas generation are as follows:

- Compliance with a qualified Greenhouse Gas Reduction Strategy, or
- 1,100 MT CO₂e/year, or
- 4.6 metric tons of CO₂ equivalent per service population (employees plus residents).

The estimated annual emissions for the project will be compared with the 1,100 MT CO₂e/year bright line threshold to determine significance for this criterion. Buildout under the proposed plan would create new GHG emissions from construction and operational activities. This is a potentially significant impact and thus will be further evaluated in the EIR.

¹¹ This environmental issue question is included for purposes of addressing CEQA Guidelines Appendix F.

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

Potentially significant impact. For the reasons noted in impact 7a), above, buildout under the proposed plan would contribute to GHG emissions that could exceed BAAQMD significance thresholds. In addition, implementation of the project must be analyzed to ensure that the project would comply with all mandatory GHG emission reduction measures that apply to the project. This is a potentially significant impact and thus will be further evaluated in the EIR.

c) Encourage activities that result in the use of large amounts of energy, or use of energy in a wasteful manner?

Potentially significant impact. Buildout under the proposed plan would result in an irreversible and irretrievable commitment of resources and energy during construction and operation, as described below. Development under the proposed plan would require the use of nonrenewable construction materials, such as concrete, metals, and plastics, construction equipment fuel, and electricity for construction staging lighting. Nonrenewable resources and energy would also be consumed during the manufacturing and transportation, and construction of the signs. Operation of the land uses within the plan area would consume energy for lighting and other electronics and natural gas for heating. Energy, in the form of fossil fuels, would also be used to fuel vehicles travelling to and from the residential and nonresidential land uses on the project plan during plan operation. Development under the proposed plan would consume non-renewable energy during both construction and operational activities and, thus, would not only use energy but could also result in the use of energy in a wasteful manner. This is a potentially significant impact and thus will be further evaluated in the EIR.

Mitigation Measures

No mitigation measures have been identified at this time. Impacts associated with this topic will be further evaluated and, if necessary, mitigated in the EIR.

Cumulative Impacts

As previously noted in Section 1.6, the anticipated cumulative buildout under the General Plan could result in the construction and operation of up to 872 additional residential units, 52 mixed-use units, 339 hotel rooms, 995,975 gross square feet of industrial uses, 507,508 gross square feet of commercial space, 551,683 gross square feet of retail space, 15,000 gross square feet of mixed-use space, and 20,000 gross square feet of office uses within the City of Healdsburg. As such, implementation of identified cumulative projects in combination with the proposed plan would result in cumulative emissions of greenhouse gases and cumulative consumption of energy. This is a potentially significant cumulative greenhouse gas emissions impact and, thus, will be further evaluated in the EIR.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
8. Hazards and Hazardous Materials <i>Would the project:</i>				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
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?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
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?	☐	☒	☐	☐

Existing Conditions

RJW Lumber Company previously operated a lumber in the plan area. The plan area has since been graded and it is now a vacant, undeveloped lot covered in vegetation. The plan area contains a LUST

Cleanup Site that was completed on April 8, 1996 according to the California State website GeoTracker¹². The Regional Water Board confirmed that no further action was needed related to petroleum releases at the LUST Cleanup site.¹³ No other existing hazardous materials are associated with the plan area.

The plan area is considered at moderate risk of wildland fire hazards. High fire zones are located approximately 0.25 mile to the south/southeast of the plan area. The plan area is undeveloped and contains mostly grassland with sloping hillsides and woodland vegetation to the north and southwest.

Environmental Evaluation

Would the project:

- 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. The residential and commercial land uses contemplated by the proposed plan do not typically involve the regular use, storage, transport, or disposal of significant amounts of hazardous materials. Construction and operation of development under the proposed plan would involve the minor routine transport and handling of hazardous substances such as diesel fuels, lubricants, solvents, asphalt, pesticides, and fertilizers. Handling and transportation of these materials could result in the exposure of workers to hazardous materials.

However, the proposed plan would not create a significant hazard to the public or the environment. Construction and operation would comply with applicable federal, State, and local laws pertaining to the safe handling and transport of hazardous materials. The use of acutely hazardous materials of any quantity that have the potential to result in releases that could potentially expose substantial numbers of people or the environment to harm is not anticipated given the proposed plan components.

Household hazardous materials can be disposed of in two ways. Residents can dispose of hazardous materials at the Household Waste Collection Facility at the Central Landfill and through local collection events held by the Sonoma County Waste Management Agency program. Commercial uses may generate hazardous materials but federal and State laws regulate transport, use, and disposal. At the federal level, CERCLA, SRA, RCRA, FIFRA, and NESHRA acts serve to track materials, apply standards for cleanup and remediation, and require certifications for handlers and adherence to guidelines tailored to specific hazardous materials. The State of California has developed Certified Unified Program Agencies, administered locally by the Healdsburg Fire Department, that ensure registration of hazardous waste generators, permitting of storage tanks, compliance with the Uniform Fire Code, implementation of emergency response procedures, employee training for facilities handling hazardous materials, implementation of hazardous materials release response plan, and mitigation of potential accidental release. The Governor's Office of Emergency Services (Cal OES) also requires that

¹² GeoTracker. Website: <https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=Healdsburg%2C+CA>.

¹³ California Regional Water Quality Control Board, North Coast Region. RJW Lumber Company. April 8, 1996.

specific businesses prepare an inventory of hazardous materials in order to implement proper emergency response plans.

Furthermore, the General Plan addresses the potential for hazardous materials to impact the public or the environment. Policies S-H-1 and S-H-2 regulate the production and use, storage, and transport of hazardous materials within the City by ensuring new developments provide for reasonable controls and protect current and new development from existing hazardous waste. Impacts would be less than significant. This topic will not be further evaluated in the EIR.

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 with mitigation incorporated. The proposed plan contemplates the development of a vacant site with a variety of new land uses. These new uses would involve the routine application of common low-level hazardous materials such as cleaning solvents, diesel, gasoline, grease/degreasers, mechanical fluids, and oil. The proposed plan components do not include industrial or commercial land uses that involve transport of hazardous materials for delivery or disposal purposes, which would not increase the risk of upset and accidents. Given the small quantities involved and the characteristics of the use, the use of hazardous materials would not be considered a potential risk to human health or the environment. The use of acutely hazardous materials of any quantity that have the potential for a reasonably foreseeable upset and accidental release into the environment is unlikely.

The plan area geotechnical report prepared indicates that the majority of the plan area is underlain with siltstone and sandstone. The central portion of the plan area is underlain by alluvial deposits consisting of clay, silt, sand, and gravel. The upper elevations in the northeast corner of the plan area and ridgeline adjacent to the northern plan area boundary are mapped as underlain by serpentinite, an ultramafic rock where naturally occurring asbestos is likely to be encountered. The geotechnical report identified highly weathered serpentinite in an isolated area along the west property line with little to no asbestos form minerals visually noticeable; however, it is likely some asbestos would exist in this type of rock.

Mass earthwork grading is not anticipated given the plan area previously underwent site grading and drainage improvements. The majority of the plan area is covered with engineered fill that was placed during remedial grading operations in 2004 on the site. Future grading in the plan area is expected be minimal, and consist mainly of relatively minor cuts and fills necessary to create road improvements, parking areas, and building pads as well as additional site drainage.

The geotechnical report did not perform a site assessment of Naturally Occurring Asbestos Mineral (NOAM) rocks or deposits. While no NOAM-bearing rocks or deposits were identified within the footprints of proposed development areas, some portions of the plan area may contain serpentinite, which contains naturally occurring asbestos. While such areas are subject to ARB's asbestos airborne toxic control measures for Surfacing Applications and for Construction, Grading, Quarrying, and Surface Mining Operations, construction workers and nearby residents could be exposed to dust from asbestos rock and soils during construction of elements of the proposed plan. Specifically,

exposure may occur in foundation excavations or pipeline trenching, and handling of NOAM materials would likely be needed during construction in the northeast portion of the plan area. This is a potentially significant impact and would be reduced to less than significant with implementation of MM HAZ-1. This topic will not be further evaluated in the EIR.

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

No impact. The plan area is located approximately 1.5 miles north of Healdsburg High School, the closest school to the plan area. Buildout under the proposed plan could include a senior living community with medical services, which may emit hazardous emissions or handle quantities of hazardous materials but in limited amounts, and consistent with applicable regulations. The emission or handling of acutely hazardous materials of any quantity at such a distance from a school precludes the possibility of a school becoming exposed to hazardous emissions or hazardous materials. No impact would occur. This topic will not be further evaluated in the EIR.

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?

Less than significant impact. The plan area is currently a vacant undeveloped lot. A lumberyard and mill operated on-site at least as far back as the 1950s until 2000. The mill equipment and previous developments were removed, and the plan area was regraded in 2004. Improvements also included activities to remediate contaminated soils with oversight by the North Coast Regional Water Quality Control Board.

The plan area is included in the State Water Resources Control Board GeoTracker database as a cleanup site. The GeoTracker database indicates cleanup activities were completed and the casefile closed in April 1996. All other sites listed in the database within 1 mile of the plan area indicate cleanup or remedial activities were completed and cases files are closed. The Department of Toxic Substance Control (DTSC) EnviroStor maintains a second database that lists hazardous sites through California. The plan area is not listed in the database, and no listed site is located within one mile of the plan area. Therefore, impacts from a known hazard on-site would be less than significant. This topic will not be further evaluated 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 result in a safety hazard for people residing or working in the project area?

Less than significant impact. The plan area is located approximately 1.2 miles southwest of the Healdsburg Municipal Airport. The Comprehensive Airport Land Use Plan for Sonoma County (CALUP) includes a description of the referral area boundaries, noise compatibility standards, safety compatibility standards, airspace protection standards, and other land use policies for the six public use airports in the County, including the Healdsburg Municipal Airport. The plan area is located within two miles of the Healdsburg Municipal Airport, and thus, within the CALUP area. As described in the City's General Plan EIR the plan area is located outside of the referral area boundary

and other county airport zones. Therefore, referral to the Sonoma County Airport Land Use Commission (ALUC) is not required. The plan does not propose any change in land use designations for the property. Therefore, the proposed plan would not expose people residing and working within the plan area to a safety hazard regarding operation of a public airport, and impacts would be less than significant. This topic will not be further evaluated in the EIR.

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. No private airstrips are located near the plan area. This condition precludes the possibility of exposing persons who reside or work within the plan area to aviation hazards. No impact would occur. This topic will not be further evaluated in the EIR.

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

Less than significant impact with mitigation incorporated. The City and County do not have adopted emergency response plans. According to the City's Circulation Plan Map, Healdsburg Avenue is designated an arterial street. Healdsburg Avenue is within the plan area and borders the eastern side of the plan area. Thus, the roadway is used for emergency response and could be used for evacuation purposes. Improvements along the east side of Healdsburg Avenue are planned as part of an approved neighboring development, Montage Healdsburg, which includes changes to the roadway and utilities, bicycle lanes, sidewalks, lighting and landscaping. The existing private railroad crossing at the entry to the plan area would be converted to a public railroad crossing and improved with crossing gates and train signalization. A 70-foot-wide right-of-way would also be transferred to the City and include two travel lanes and one left-turn lane to provide access into the project plan. In addition, a new City fire station is planned with driveway access directly opposite the proposed plan entryway.

The proposed plan includes modifications to Healdsburg Avenue. Future signalization for the new intersection of the crossing road and Healdsburg Avenue is planned to avoid potential traffic congestion or backups on Healdsburg Avenue. The modifications would not impair or interfere with emergency response or evacuation (e.g. permanent road closures, lane narrowing, etc.). However, the plan area currently has just a single access across the NCRA railway. Given the size of the proposed development and the potential need for plan area evacuation in the case of wildfires or other emergencies, the lack of secondary emergency vehicle access to the plan area represents a potentially significant impact. Impacts would be reduced to less than significant with implementation of MM HAZ-2. This topic will not be further evaluated in the EIR.

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?

Less than significant impact with mitigation incorporated. The City General Plan mapped areas for potential development in sub-areas throughout the City limit/Urban Growth Boundary (Figure III-7). The City General Plan included mapped areas with high to moderate risks of wildland fire (Figure

IV.H-1). High fire zones are generally characterized by wooded hillsides and ridges, open space, and low density/intensity land uses. The areas east of the City are generally located in a high wildfire area whereas downtown Healdsburg, largely urbanized or surrounded by infrastructure, precludes exposing people or structures to significant risk of wildland fires.

The plan area is located in the northwest portion of Development Sub-Area D, and neighbor Development Sub-Area C directly to the east. The plan area is considered at moderate risk of wildland fire hazards. High fire zones are located approximately 0.25 mile to the south/southeast of the plan area (Sub-Area A). The plan area and project plan is undeveloped and contains mostly grassland with sloping hillsides and woodland vegetation to the north and southwest.

Consistent with the General Plan EIR, the risk of exposure to wildland fires would be minimized through design measures and building practices. Policies S-D-1 through S-D-5 ensures that development in at-risk area implements appropriate design and building materials. In addition, a new fire station opposite of the plan area is planned, which may result in improved response times to fires. Therefore, with implementation of MM HAZ-2, the potential increased exposure of people or structures to wildland fires would be minimized, and the impact would be less than significant. This topic will not be further evaluated in the EIR.

Mitigation Measures

MM HAZ-1 The following requirement shall be imposed as a condition of approval prior to all development within the plan area: The Comstock property developer shall prepare a dust control plan that specifies measures to reduce fugitive dust emissions during construction. The developer shall also prepare an asbestos dust mitigation plan to be submitted to and approved by BAAQMD, in accordance with 17 CCR Section 93105 and 8 CCR Section 1529.

MM HAZ-2 The following requirement shall be imposed as a condition of approval prior to or concurrent with all development within the plan area: The Comstock property developer shall provide a secondary emergency vehicle access point to facilitate more orderly and efficient levels of development and minimize delaying emergency response times. Potential location options for secondary emergency access include, but are not limited to, a second railroad crossing over the NCRA railway north of the main entrance or a new route south of the plan area through the vacant parcel owned by SIMI Winery, Inc. (APN 091-060-032) and into the plan area. If secondary emergency access is not provided to satisfy fire safety standards, development on the Comstock property will be limited to the extent allowed under applicable fire safety regulations, codes, and ordinances.

Cumulative Impacts

As previously noted in Section 1.6, the anticipated cumulative buildout under the General Plan could result in the construction and operation of up to 872 additional residential units, 52 mixed-use units, 339 hotel rooms, 995,975 gross square feet of industrial uses, 507,508 gross square feet of

commercial space, 551,683 gross square feet of retail space, 15,000 gross square feet of mixed-use space, and 20,000 gross square feet of office uses within the City of Healdsburg. As such, implementation of the aforementioned identified cumulative projects in combination with the proposed plan could result in wildfire- and emergency response-related impacts or accidental release of hazardous materials, which could in turn result in cumulative exposure of persons or structures to hazards and hazardous materials. However, with adherence to federal, State, and local laws related to transport, use, and disposal of hazardous materials, and compliance with the Uniform Fire Code and emergency response procedures as well as project-specific hazards and hazardous materials recommendations (i.e., mitigation measures) by project proponents for the identified cumulative projects and the proposed plan, the cumulative hazards and hazardous materials impact would be less than significant. This cumulative topic will not be further evaluated in the EIR.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
9. Hydrology and Water Quality <i>Would the project:</i>				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
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?	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
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?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
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?	☐	☐	☒	☐
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐

Existing Conditions

The plan area is located in the City of Healdsburg and subject to water quality regulations established by the North Coast Regional Water Quality Control Board. The Russian River and Foss Creek are the two main surface waters in the City of Healdsburg. The plan area does not contain any water bodies, rivers, or streams but does contain two existing 48-inch- and 36-inch-diameter culverts that convey stormwater. There are drainage ditches in the plan area that convey stormwater to these culverts. The plan area is not located within a designated Federal Emergency Management Agency (FEMA) 100-year floodplain.

Environmental Evaluation

Would the project:

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

Less than significant impact. The plan area currently is undeveloped with no structures or impervious surfaces. However, the City anticipates development in the plan area to consist of new residential and commercial land uses. Only minor grading and trenching is anticipated as mass grading of the plan area has already occurred. However, future grading and excavation activities may result in temporary impacts to surface water quality. Surface runoff that flows across the plan area may contain sediments that may be discharged into the storm drainage system. For construction of projects that would disturb more than one acre of soil, compliance with the NPDES General Permit for Construction Activities is required.

City of Healdsburg Ordinance No. 1091 requires all new residential, commercial, office, industrial, public or quasi-public construction that requires design review and/or a building or grading permit prepare a SWPPP. Sediment and erosion controls are required to protect water quality while a site is under construction. Foss Creek, located on the southeastern portion of the plan area, would need to be protected during all construction activities from this runoff. A detailed list of BMPs must be included in the SWPPP to prevent the discharge of pollutants. Future projects contemplated in the proposed plan with implementation of best management practices (BMPs) would not result in significant construction-related water quality impacts.

The proposed plan would redevelop the area with new residential and commercial development. The new projects would be required to meet post-construction stormwater treatment standards. New storm drains would be located along newly developed roads, private driveway, and Healdsburg Avenue. Project applicants would also be required to prepare a Standard Urban Stormwater Mitigation Plan (SUSMP) in compliance with the RWQCB requirements and the City's regulatory policies pertaining to stormwater runoff—including rain gardens to retain water and allow for infiltration, and vegetated swales—and incorporate BMPs into project designs and, according to the SUSMP, capture and infiltrate the total runoff from the project from an 85th percentile, 24-hour storm. Therefore, impacts to water quality and waste discharge requirements would be less than significant. This topic will not be further evaluated in the EIR.

- 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 City would provide the project with potable water service, which it obtains from well fields located along the Russian River and Dry Creek. According to the General Plan, the City has the rights to 3,376 acre-feet of water, with as much as 4,179 acre-feet available to supplement municipal water sources. According to the recently adopted 2015 Urban Water Management Plan, the City does not use any groundwater supplies as a municipal water source. Therefore, impacts related to groundwater supplies would be less than significant. This topic will not be further evaluated in the EIR.

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

Less than significant impact. The proposed plan contemplates development on a vacant site with new residential and commercial land uses. Future projects would install a storm drain system that would collect runoff and discharge it to the off-site public system. Where possible, runoff would be directed to landscaped areas for filtration and infiltration. As stated above, stormwater drains would be located along the newly developed roads, private driveways, and planned improvements to Healdsburg Avenue. The plan area's drainage would also comply with the RWQCB requirements and with the City's regulatory policies pertaining to stormwater runoff. No alteration of the course of any stream or river would occur that would result in substantial erosion or siltation. In addition, a SWPPP must be added to the engineering phase of construction as required by the City's Stormwater Management Program. Implementation of the SWPPP would ensure the impacts of erosion or siltation would be less than significant. This topic will not be further evaluated in the EIR.

- 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. As described above, the proposed plan contemplates development on a vacant site. Future projects would install a storm drain system that would collect runoff and discharge it to the off-site public system. Stormwater drains would be located along the newly developed roads, private driveways, and Healdsburg Avenue. As discussed in impact 9a), above, future projects would prepare a SUSWMP to comply with the RWQCB requirements and the City's regulatory policies pertaining to stormwater runoff. Where possible, runoff would be directed to landscaped areas for filtration and infiltration. In addition, bioretention beds (rain gardens) would provide stormwater treatment and reduce the amount of post-development stormwater runoff. Development is subject to compliance with Low Impact Design standards, which are applied as a requirement of development through reviews conducted by the City Department of Public Works. This includes but is not limited to disconnected roof drains, interceptor trees, and appropriately selected plants incorporated into the design. No alteration of the course of any stream or river would occur as a result of implementation of the plan. Therefore, impacts would be less than significant. This topic will not be further evaluated in the EIR.

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

Less than significant impact. Future projects would result in the creation of new impervious surfaces in the form of driveways and rooftops. However, compliance with the existing regulations including NPDES permit conditions, and the provisions of the City's Municipal Code would reduce impacts to the maximum extent practicable and impacts would be less than significant. Compliance with the City's Municipal Code and the City's suggested Conditions of Approval would mitigate project impacts to less than significant levels. As such, impacts would be less than significant. This topic will not be further evaluated in the EIR.

f) Otherwise substantially degrade water quality?

Less than significant impact. As stated above in impact 9a), construction activities related to projects could introduce pollutants and sediment into water runoff from the site. Future project applicants would be required to fulfill requirements regarding the provision of site design measures, source controls, Low Impact Development treatment measures, hydromodification management, and construction BMPs that are appropriate for the type and size of the project to control stormwater pollution. As described above, under the City's Standard Storm Water Management Plan Guidelines, BMPs to avoid erosion and off-site discharges of water runoff would be implemented. Implementation of these BMPs would avoid water quality impacts to adjacent lands and waterways. Accordingly, impacts would be less than significant. This topic will not be further evaluated in the EIR.

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. As identified in the General Plan EIR, the plan area is not located within a FEMA designated Special Flood Hazard Area subject to inundation in the event of a 100-year flood (Figure IV.I-1). Therefore, no impact would occur. This topic will not be further evaluated in the EIR.

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

No impact. As stated above, the plan area is not located within a FEMA designated Special Flood Hazard Area subject to inundation in the event of a 100-year flood. Therefore, no impact would occur. This topic will not be further evaluated in the EIR.

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?

Less than significant impact. According to the City General Plan, flood control for the lower Russian River is provided primarily by Warm Springs Dam. The dam is located on Dry Creek, a tributary of the Russian River, located approximately 10 miles northwest of the City. Lake Sonoma was created by this dam. Coyote Dam is an earthen dam located on the East Fork of the Russian River above Ukiah in Mendocino County. The dam is part of a system that provides water to Mendocino, Sonoma, and Marin counties. Although Warm Springs Dam was built on a medium-size fault, it was designed to absorb the maximum expected ground shaking. Failure of this dam could inundate most of the City to an elevation of 230 feet.

The plan area is located within an area that is located below 230 feet, according to the Healdsburg General Plan EIR Figure IV.1-2. To address potential impacts, the General Plan requires implementation measures proposed for the revised Safety Element of the proposed General Plan include S-4 which states that the City will “Maintain and periodically update the City’s Emergency Operations Plan, Recovery Manual and Hazard Mitigation Plan. As part of the periodic updates, the City shall review county and state emergency response procedures to ensure that they are coordinated with city procedures” and S-5, which states that the City will “Conduct periodic emergency response exercises to test the effectiveness of City emergency response procedures.” These two implementation measures will assist in minimizing risks associated with flooding due to a dam failure. Although the proposed plan will increase the number of people exposed to the risk of flooding, emergency and evacuation plans developed by both the USACE and the City will reduce the risk of injury or death resulting from this flooding. Therefore, this impact would be less than significant. This topic will not be further evaluated in the EIR.

j) Inundation by seiche, tsunami, or mudflow?

Less than significant impact. The plan area location and topographical characteristics are not susceptible to the effects of a seiche, tsunami, or mudflows. A seiche affects locations adjacent to larger water bodies such as lakes or reservoirs. The plan area is not adjacent to an enclosed body of water and therefore is not susceptible to the effects of a seiche. The plan area is also not located near the Pacific Ocean and therefore is not susceptible to the effects of a tsunami. In addition, based upon the relatively flat topography immediately bounding the site, the potential for mudflow to affect the site would be minimal. Therefore, impacts associated with a seiche, tsunami, or mudflow are less than significant. This topic will not be further evaluated in the EIR.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

As previously noted in Section 1.6, the anticipated cumulative buildout under the General Plan could result in the construction and operation of up to 872 additional residential units, 52 mixed-use units, 339 hotel rooms, 995,975 gross square feet of industrial uses, 507,508 gross square feet of commercial space, 551,683 gross square feet of retail space, 15,000 gross square feet of mixed-use space, and 20,000 gross square feet of office uses within the City of Healdsburg. As such, implementation of the aforementioned identified cumulative projects in combination with the proposed plan could result in cumulative surface and groundwater quality-related impacts or drainage/runoff-related erosion, flooding, and stormwater system exceedance impacts. However, with adherence to the NPDES permit, a SWPPP as part of its Construction General Permit, and the City’s BMPs as part of its Low Impact Development manual as well as project-specific hydrology and water quality recommendations (i.e., mitigation measures) by project proponents for the identified cumulative projects and the proposed plan, the cumulative hydrology and water quality impact would be less than significant. This cumulative topic will not be further evaluated in the EIR.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
10. Land Use and Planning <i>Would the project:</i>				
a) Physically divide an established community?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?	☐	☐	☐	☒

Existing Conditions

The plan area is currently designated in the General Plan as MU (Mixed Use 10-16 UPA), Zoning Designation MU Mixed Use, and within the North Entry Special Study Area. The plan area was previously used as a lumber yard and mill until 2000 and improved for development in 2004. The plan area is now vacant and undeveloped.

Environmental Evaluation

Would the project:

a) Physically divide an established community?

Less than significant impact. The plan area consists of undeveloped private and publicly owned land, located in a transitional area between the rural character of Alexander Valley to the north and an urban character of the City to the south. The City General Plan recognized special study areas within Healdsburg with development potential and called for preparation of the North Entry Area Plan. The proposed plan is being developed consistent with existing General Plan guidelines as well as development policies, and thus consistent with City land use regulations.

Although individual components of the proposed plan would be constructed on vacant land, the plan area is designated mixed-use in the City General Plan. The City would conduct review of future specific projects to ensure that the mix of uses is compatible and consistent with the intent of the North Entry Area Plan. As such, buildout under the proposed plan would not physically divide an established community. Impacts would be less than significant. This topic will not be further evaluated in the EIR.

- 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?**

Less than significant impact. The plan area is designated mixed-use in the General Plan. Policy LU-18 allows for nonresidential uses in mixed use areas but such uses should serve residents and/or visitors in a manner that does not undermine the role of the downtown as the commercial center of Healdsburg. The specific location of proposed development would not substantially alter the planned land use composition detailed in the General Plan. Moreover, the proposed plan is being developed to further City land use development objectives and would not conflict with any applicable land use plan, policy, or regulation that was adopted for the purpose of avoiding or mitigating an environmental effect.

Development under the proposed plan could include components such as a senior community, residential apartments, a hotel, offices, and restaurants. Consistent with the General Plan, development on-site would be required to comply with applicable General Plan policies and land use regulations. As projects are proposed, the City would review them for compliance prior to approval of the necessary permits. As such, impacts would be less than significant. This topic will not be further evaluated in the EIR.

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

No impact. As noted above, Biological Resources, the proposed plan area does not conflict with any applicable habitat conservation plan or natural communities conservation plan. No impact would occur. This topic will not be further evaluated in the EIR.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

As previously noted in Section 1.6, the anticipated cumulative buildout under the General Plan could result in the construction and operation of up to 872 additional residential units, 52 mixed-use units, 339 hotel rooms, 995,975 gross square feet of industrial uses, 507,508 gross square feet of commercial space, 551,683 gross square feet of retail space, 15,000 gross square feet of mixed-use space, and 20,000 gross square feet of office uses within the City of Healdsburg. However, implementation of the aforementioned identified cumulative projects in combination with the proposed plan would not result in division of an established community or conflict with applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. Thus, the cumulative land use and planning impacts would be less than significant. This cumulative topic will not be further evaluated in the EIR.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
11. Mineral Resources <i>Would the project:</i>				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) 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?	☐	☐	☐	☒

Existing Conditions

The plan area has not historically supported mineral extraction activities and is not a known location for mineral deposits. A soils report prepared for the plan area indicates the underlying soils consist mainly of gravelly loams and clay loams. The primary mineral resources in the City consist of aggregate, sand, and gravel. No mineral extraction activities occur within the plan area.

Environmental Evaluation

Would the project:

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

No impact. The State Mines and Geology Board designate Statewide sand and gravel deposits of regional significance. The Board identified terrace-mining pits along the Russian River as MRZ-2, located primarily along the riverbanks. Syar Industries currently processes sand and gravel at its Healdsburg Plant located along the Russian River approximately 3.5 miles south of plan area. General Plan Policy NR-G-1 expresses the City's intent to allow for the continued use of properties along the Russian River for sand and gravel mining operations. The General Plan designated the plan area for mixed-use land use and it is not located in a mineral zone, as mapped in the General Plan EIR (Figure IV.K-1). Construction of proposed plan components would not result in the loss of mineral resources. Therefore, no impact would occur. This topic will not be further evaluated in the EIR.

- 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. The plan area supported a lumberyard and mill operations until 2000. Previous buildings and structures were removed, and no historical mineral extraction activities are known to have occurred on-site. As explained above, the General Plan designated the plan area for mixed-use land uses and the plan area is not identified within or near a mineral zone. Therefore, construction of

proposed plan components would not result in the loss of availability of a locally important mineral resource. No impact would occur. This topic will not be further evaluated in the EIR.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

As previously noted in Section 1.6, the anticipated cumulative buildout under the General Plan could result in the construction and operation of up to 872 additional residential units, 52 mixed-use units, 339 hotel rooms, 995,975 gross square feet of industrial uses, 507,508 gross square feet of commercial space, 551,683 gross square feet of retail space, 15,000 gross square feet of mixed-use space, and 20,000 gross square feet of office uses within the City of Healdsburg. However, implementation of the aforementioned identified cumulative projects in combination with the proposed plan would not result in loss of availability of a known mineral resource of value to the region and the residents of the State. Thus, the cumulative mineral resources impact would be less than significant. This cumulative topic will not be further evaluated in the EIR.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
12. Noise <i>Would the project result in:</i>				
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) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☒	☐	☐	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☒	☐	☐	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☒	☐	☐	☐
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Existing Conditions

The plan area is currently undeveloped, vacant land which is adjacent to U.S. Highway 101 and Healdsburg Avenue. The primary noise sources in the plan area are traffic noise from these adjacent roadways, and temporary construction activity at a site across Healdsburg Avenue to the east.

Environmental Evaluation

Would the project result in:

- 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. As indicated in General Plan EIR Figure IV.L-2, the plan area and project plan is currently exposed to noise levels in excess of 75 dbA CNEL associated with traffic noise on Highway 101 and Healdsburg Avenue. In addition, a freight rail line owned by the NCRA is expected to

service both freight trains and the future Sonoma-Marín Area Rail Transit (SMART) operations. As discussed above, the City may require new development to implement measures that reduce noise-related impacts in the Federal Railroad Administration (FRA)-designated “Quiet Zone” at the site entry/Healdsburg Avenue intersection. If the on-site Quiet Zone is not implemented, train horns would be required to sound resulting in noise levels ranging between 96 dBA and 110 dBA L_{max} as measured at 50 feet. While infrequent and intermittent, the use of train horns would cause a substantial increase in ambient noise levels in the vicinity.

The General Plan EIR identifies the noise exposure range of 61 dBA to 70 dBA CNEL to be “conditionally acceptable” for nursing homes and multi-family residential development. The EIR also identifies the noise exposure range of 67.6 dBA to 77.5 dBA CNEL to be “conditionally acceptable” for commercial development. The General Plan EIR notes that new development should be undertaken only after a detailed noise analysis that includes insulation features are included in project design. Impacts associated with noise exposure are potentially significant and thus will be further evaluated in the EIR.

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

Potentially significant impact. Ground vibration can be caused by temporary activities such as construction and regular, reoccurring activities such as truck and train movements. The NCRA and SMART District intend to operate train service along the railroad tracks that run along the eastern portion of the plan area. Construction near the tracks with noise-sensitive uses may be required to incorporate structural noise- and vibration-reduction measures to avoid significant groundborne vibration from trains. Therefore, this is considered a potentially significant impact and thus 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 plan contemplates redeveloping the plan area with a range of new land uses. The new uses would add new daily trips to local roadways, including those that experience existing noise levels of 70 dBA CNEL as shown in the City General Plan EIR Figure IV.L-2. This has the potential to cause a substantial permanent increase in ambient noise levels in the plan area vicinity. Additionally, buildout under the proposed plan would generate on-site, non-transportation noise from operational activities (loading/unloading activities, stationary mechanical equipment operation, etc.) that also have the potential to increase ambient noise levels. Accordingly, operational noise associated with the proposed plan is a potentially significant impact and thus 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. The proposed plan contemplates redeveloping the plan area with a range of new land uses. Construction activities would involve the use of heavy equipment that has the potential to expose surrounding receptors to substantial temporary increases in ambient noise

levels in the plan area vicinity. As such, construction noise associated with buildout of the proposed plan is potentially significant and thus will be further evaluated 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 nearest public airport to the project plan is the Healdsburg Municipal Airport, located approximately 1.3 miles northwest of the project plan. Because of its distance from the airport's runways, the project plan is located outside of the 55-dBA CNEL airport noise contours. Therefore, persons residing or working at the project plan would not be exposed to noise levels from airport activity that would be in excess of normally acceptable standards. Therefore, no impact would occur. This topic will not be further evaluated in the EIR.

- 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. No private airstrips are located within two miles of the plan area. This condition precludes the possibility of exposing persons residing or working in the plan area vicinity to excessive aviation noise from private airstrips. Therefore, no impact would occur. This topic will not be further evaluated in the EIR.

Mitigation Measures

No mitigation measures have been identified at this time. Impacts associated with this topic will be further evaluated and, if necessary, mitigated in the plan and/or EIR.

Cumulative Impacts

As previously noted in Section 1.6, the anticipated cumulative buildout under the General Plan could result in the construction and operation of up to 872 additional residential units, 52 mixed-use units, 339 hotel rooms, 995,975 gross square feet of industrial uses, 507,508 gross square feet of commercial space, 551,683 gross square feet of retail space, 15,000 gross square feet of mixed-use space, and 20,000 gross square feet of office uses within the City of Healdsburg. As such, implementation of identified cumulative projects in combination with the proposed plan would result in cumulative noise and vibration, which could in turn result in exposure of persons to noise and vibration levels in excess of standards established in the General Plan or noise ordinance. This is a potentially significant cumulative noise impact and, thus, will be further evaluated in the EIR.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
13. Population and Housing <i>Would the project:</i>				
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) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Existing Conditions

As discussed in the Healdsburg Housing Element 2015–2023, the average City household size was 2.56 persons per household. In addition, according to the Association of Bay Area Governments (ABAG), the City had a population of 11,267 in 2010. The proposed plan area does not contain existing homes and is currently vacant, undeveloped land.

Environmental Evaluation

Would the project:

- 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)?**

Less than significant impact. The proposed plan contemplates redevelopment of the plan area with new residential and commercial land uses. Based on preliminary concept plans for the Comstock site, anticipated future uses could include: an independent senior living community, a boutique hotel, commercial uses, and multifamily housing. This mix of uses is consistent with mixed use land use designations, mixed use zoning, and the 290 residential units and 200,000 square feet of commercial development anticipated within the North Entry Area Plan.

The General Plan projects population at full City buildout to be 11,600 in 2020 and 12,300 in 2030. Consistent with the General Plan and anticipated buildout in the Healdsburg Housing Element 2015–2023, the proposed plan would accommodate population growth with new residential units and commercial development consistent with the land use designation and within anticipated buildout

under the General Plan. Therefore, the impact would be less than significant. This topic will not be further evaluated in the EIR.

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

No impact. The plan area does not currently contain dwelling units. This condition precludes the possibility of displacement of existing housing. No impact would occur. This topic will not be further evaluated in the EIR.

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

No impact. The plan area does not currently contain any dwelling units. This condition precludes the possibility of displacement of persons. No impact would occur. This topic will not be further evaluated in the EIR.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

As previously noted in Section 1.6, the anticipated cumulative buildout under the General Plan could result in the construction and operation of up to 872 additional residential units, 52 mixed-use units, 339 hotel rooms, 995,975 gross square feet of industrial uses, 507,508 gross square feet of commercial space, 551,683 gross square feet of retail space, 15,000 gross square feet of mixed-use space, and 20,000 gross square feet of office uses within the City of Healdsburg. However, implementation of the aforementioned identified cumulative projects in combination with the proposed plan would not induce substantial population growth or result in substantial displacement of housing or persons. Thus, the cumulative population and housing impact would be less than significant. This cumulative topic will not be further evaluated in the EIR.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
14. Public Services <i>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:</i>				
a) Fire protection?	☐	☐	☒	☐
b) Police protection?	☐	☐	☒	☐
c) Schools?	☐	☐	☒	☐
d) Parks?	☐	☐	☒	☐
e) Other public facilities?	☐	☐	☒	☐

Existing Conditions

The plan area is within the City of Healdsburg and would be served by the City of Healdsburg Fire Department, Police Department, Healdsburg Unified School District, City of Healdsburg Parks and Recreation, and Healdsburg Regional Library. The closest fire station to the plan area is the CAL FIRE Healdsburg Station located approximately one mile to the north. In addition, the closest City of Healdsburg fire station is located 1.94 miles to the south. The closest police station is located approximately 2.34 miles to the south.

Environmental Evaluation

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. The plan area is located between U.S. Highway 101 and Healdsburg Avenue in the northern end of the City. Consistent with the General Plan, the plan contemplates development on a currently vacant site with a mix of residential and commercial uses. The plan area is located approximately two miles north of the Healdsburg Fire Station at the northwest corner of Healdsburg Avenue and Grant Street. The fire station currently has three Type 1 fire engines and one Type 2 engine, one ladder truck, and three utility vehicles. Staffing resources include 11 full-time firefighters, 12 paid personnel and 18 Reserve Firefighters.

The General Plan EIR evaluated whether development facilitated by the General Plan would require fire protection that exceeds current staffing or facilities in order to maintain acceptable service and

performance objectives. According to the General Plan and General Plan EIR, the average response time for the Healdsburg Fire Department is 4 minutes and 2 seconds; response times to the more rural locations in the plan area may take as long as 6 minutes. The City identified sub-areas for development potential, including areas in the northern city limits, which may require additional fire department staff to maintain response times. However, the increased demand for fire protection services would be gradual and incremental over the 20-year period of the General Plan.

Future development contemplated in the plan area would not itself require a new fire substation. The plan area is located in the northern portion of the City and development of the site with mixed uses is already contemplated under the General Plan. Future development is not expected to substantially increase response times. The proposed plan is consistent with General Plan guidance and regulations and future development would also be required to incorporate safety measures including fire hydrants and fire-resistant building materials as well as other fire protective measures.

As discussed in the General Plan EIR, the City evaluated the impact of the Montage Healdsburg development project, a large residential development, located opposite of the plan area. Because of the distance between the City's existing fire station and Montage Healdsburg, the development project included the construction a fire substation, thereby reducing response times to the project area. The new substation would service the plan area and proposed plan, and thus would maintain an acceptable response time.

Key to fire protection is capacity of the water system to provide sufficient flow for firefighting purposes. The current water system meets fire flow demand and any new development would be required to comply with all applicable Fire Code requirements associated with adequate fire access, fire flows, and number hydrants. The Montage Healdsburg development improvement plans propose to extend two 12-inch water mains adjacent to the plan area that would provide a water distribution system for new development. In addition, improvements to provide water services to the plan area are being coordinated with the Montage Healdsburg development project. If development of the plan area is pursued before the improvements approved for development of the Saggio Hills Area Plan are completed, then the developer of the Comstock property would be required to complete this work. Furthermore, General Plan Policy PS-E-2 requires all new mixed-use developments to have built-in fire protection equipment, which is assured at the time of construction with development permits. Therefore, impacts would be less than significant. This topic will not be further evaluated in the EIR.

b) Police protection?

Less than significant impact. The Healdsburg Police Department Headquarters is located at 238 Center Street, approximately 2.33 miles south of the plan area.

As discussed in the General Plan EIR, the City considered whether new residential and commercial development would increase police staffing or facility needs. Development facilitated by the General Plan would increase demand for police protection and increase the number of service calls received by the Police Department. General Plan policies S-E-1 through S-E-4 address the City's police staffing needs and coordinate new development with police facility improvements. The City of Healdsburg

Police Department is responsible for monitoring and maintaining adequate staffing to meet the City's service requirements, as discussed for buildout in the General Plan. While the City anticipates the need for additional officers and facilities in the future, the City will assess development impact fees from new development that are sufficient to maintain adequate police service levels.

The plan area is located in northern portion of the City and development of the site with mixed uses as contemplated under the General Plan. Future development is not expected to substantially increase police response times. The proposed plan is consistent with General Plan guidance and regulations. Development under the proposed plan would be required to incorporate safety and security measures, including parking lot lighting and other loss prevention measures to deter and prevent criminal activity. Development plans are routinely referred to the Police Department for review and comment, to assure safety concerns are considered and addressed. This includes ensuring that adequate lighting of walkways, parking lots, and entryways is provided and shown on plans. Existing facilities can accommodate police service needs at the assumed future full-built of the General Plan. Development under the proposed plan would not physically alter police facilities, increase the need for new or altered police facilities, or cause the construction, which could cause significant environmental impacts. Therefore, impacts would be less than significant. This topic will not be further evaluated in the EIR.

c) Schools?

Less than significant impact. The proposed plan contemplates the development of up to 290 residential units. The added residents would result in an increased demand for school services. The plan area is located in the Healdsburg Unified School District (HUSD), which includes two elementary schools, a junior high, and a high school. The HUSD enrolls about 2,200 students per year with a capacity to accommodate up to 3,900 students. In addition, several non-HUSD schools add to student enrollment capacities. Based on a student generation rate of 0.6 per residential dwelling unit, as provided by the General Plan EIR, the proposed plan could generate as many as 174 new students. The proposed residential-unit development is consistent with the buildout scenario of the General Plan. The project would contribute developer fees, pursuant to state law, to fund the construction or maintenance of school facilities and school services. Therefore, the proposed plan would not create a need for new or expanded school facilities. The impact would be less than significant. This topic will not be further evaluated in the EIR.

d) Parks?

Less than significant impact. The proposed plan contemplates a mixed-use development that could include such uses as a senior community, a boutique hotel, a commercial office complex, and multi-family housing. The mixed use zoning standards in Healdsburg Municipal Code Section 20.08.175.B require a minimum of 200 square feet of usable open space for each dwelling. Thus, future multi-family development would include usable open space for future resident. The proposed plan would not remove existing parkland but would increase demand on park services.

General Plan Policy PS-H-4 sets a minimum citywide ratio of 5.0 acres of parkland per 1,000 residents for planning purposes. The City's 2030 General Plan Background Report identified

approximately 43-acres of public parkland, including the City's seven neighborhood and community parks. The existing 3.50-acre Barbieri Brothers Park is located approximately 1,100 feet southeast of the plan area, which provides local residents with walking paths, playgrounds, and sport facilities. In addition, the 155-acre Healdsburg Open Space Preserve is located approximately 0.33 mile southeast of the plan area.

The General Plan indicated a 16-acre parkland deficiency towards meeting the City's goal of park acreage relative to its population. The City is in the process of updating its Parkland Mitigation Fees (per the Quimby Act), and new development would be required to pay development impact fees and/or provide on-site parks. Furthermore, the City recently approved an approximately 36-acre community park that will be constructed as part of the Montage Healdsburg project, located across from the plan area. The City also has a joint use agreement with the Healdsburg Unified School District to utilize its fields for recreational activities. The City's Community Services Department, in addition to other responsibilities, would operate and maintain the City's system of parks and recreational facilities. Therefore, impacts to existing and planned parks would be less than significant. This topic will not be further evaluated in the EIR.

e) Other public facilities?

Less than significant impact. Development envisioned under the proposed plan could create an increase in the demand for other public facilities. The Healdsburg Regional Library is located approximately two miles south of the plan area, and the Healdsburg Community Center is located approximately 0.76 mile south. Pursuant to State law, the City would require new development to pay impact fees that offset the costs associated with providing additional public services.

The proposed plan is consistent with the land use intensities and densities identified in the General Plan development assumptions at full-buildout. The General Plan did not identify any need for public facilities in the plan area and did not specifically evaluate whether new development facilitated by the General Plan would result in substantial adverse physical impacts. Therefore, it is expected that the development under the proposed plan would be served by existing and planned-for public facilities. Impacts would be less than significant. This topic will not be further evaluated in the EIR.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

As previously noted in Section 1.6, the anticipated cumulative buildout under the General Plan could result in the construction and operation of up to 872 additional residential units, 52 mixed-use units, 339 hotel rooms, 995,975 gross square feet of industrial uses, 507,508 gross square feet of commercial space, 551,683 gross square feet of retail space, 15,000 gross square feet of mixed-use space, and 20,000 gross square feet of office uses within the City of Healdsburg. However, implementation of the aforementioned identified cumulative projects in combination with the proposed plan would not result in substantial adverse physical impacts associated with the provision

of new or physically altered governmental facilities or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts. Thus, the cumulative public services impact would be less than significant. This cumulative topic will not be further evaluated in the EIR.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☒	☐
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?	☐	☐	☐	☒

Existing Conditions

The existing 3.50-acre Barbieri Brothers Park is located approximately 1,100 feet southeast of the plan area, and provides local residents with walking paths, playgrounds, and sport facilities. In addition, the 155-acre Healdsburg Open Space Preserve is located approximately 0.33 mile southeast of the plan area.

Environmental Evaluation

- 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?**

Less than significant impact. The plan would add residential development, and the resultant population would increase demand for and use of City parks. Greater use of City parks and recreational facilities may result in physical deterioration. However, population growth is only one factor in determining whether parks and recreational facilities would deteriorate through increased use. Other variables include park design, age, infrastructure, and park use.

The City currently operates and maintains a variety of parks and recreational facilities. There are seven neighborhood parks and community parks within the City, and several other county-owned park facilities nearby. The Barbieri Brothers Park located closest to the plan area provides local residents with walking paths, playgrounds, and sport facilities. In addition, as discussed in impact 14d), the City is planning a 34-acre community park as part of the Montage Healdsburg development project.

The proposed plan is consistent with the General Plan to provide a vision for redevelopment in the northern portion of the City. The proposed plan does not propose land use or zoning changes and would not change the type or extent of development allowed under the General Plan. Development pursuant to the proposed plan would still comply with the densities, standards, and design

guidelines permitted under the General Plan. Therefore, impacts on existing and planned park facilities are less than significant. This topic will not be further evaluated in the EIR.

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. The proposed area plan does not include or require new park or recreation facilities. However, the plan's residential component would incorporate public common spaces, passive recreational outdoor areas, and possibly a tot lot or community garden. The plan is also consistent with the City General Plan. In addition, and as discussed above, the Meontage Healdsburg development project east of the plan area includes the construction of a new 36-acre community park with recreational facilities, which would serve residents as part of the proposed plan. The Healdsburg Open Space Preserve located less than 0.5 mile from the plan area offers a trail network of 3 miles of hiking trails through grasslands, oak woodlands, wetlands, and chaparral. Therefore, the proposed plan and the proposed plan's increased demand on recreational facilities would not have an adverse physical effect on the environment. No impact would occur. This topic will not be further evaluated in the EIR.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

As previously noted in Section 1.6, the anticipated cumulative buildout under the General Plan could result in the construction and operation of up to 872 additional residential units, 52 mixed-use units, 339 hotel rooms, 995,975 gross square feet of industrial uses, 507,508 gross square feet of commercial space, 551,683 gross square feet of retail space, 15,000 gross square feet of mixed-use space, and 20,000 gross square feet of office uses within the City of Healdsburg. However, implementation of the aforementioned identified cumulative projects in combination with the proposed plan would not result in increased use of existing recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated; nor would the proposed plan include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment. Thus, cumulative public services impacts would be less than significant. This cumulative topic will not be further evaluated in the EIR.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
16. Transportation/Traffic <i>Would the project:</i>				
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) 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?	☒	☐	☐	☐
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?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
e) Result in inadequate emergency access?	☒	☐	☐	☐
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?	☐	☐	☒	☐

Existing Conditions

Plan area access is currently available from a driveway located on the west side of Healdsburg Avenue approximately 150 feet south of the Healdsburg Avenue/Passalacqua Road intersection. Traffic counts along Healdsburg Avenue determined that average traffic volumes in the vicinity of the plan area are 5,340 vehicles per day.

Environmental Evaluation

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?**

Potentially significant impact. The proposed plan contemplates the redevelopment of a graded, vacant site with a range of new residential and commercial land uses. The new uses could result in different peak-hour impacts, and changes in local commute patterns. In addition, the uses would generate new traffic that may cause potentially significant impacts. These impacts could include traffic impacts within the plan area, at nearby intersections, or on the roadway network. This is a potentially significant impact. This topic will be further evaluated 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. As noted above, the construction of residential and commercial uses as contemplated by the proposed plan could result in peak-hour traffic impacts. Potential impacts of buildout under the proposed development on regional freeways and local roadways, in conjunction with changing commute patterns and traffic intensities unrelated to the proposed plan may also cause potentially significant impacts. This is a potentially significant impact. This topic will be further evaluated 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 plan area is located outside the Healdsburg Municipal Airport influence area. The plan area is located within two miles of the Healdsburg Municipal Airport, and thus, within the CALUP. As described in the General Plan EIR, only a few lots west of U.S. Highway 101 are located within the CALUP referral area and its traffic pattern as well as outer safety zones. All other potential development, including the plan area to the east of the highway, is located outside of the referral area boundary and all other county airport zones. This condition precludes the possibility of future projects altering air traffic patterns at the airport. No impact would occur. This topic will not be further evaluated in the EIR.

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

Less than significant impact. The proposed plan contemplates development on an existing graded, vacant site with new residential and commercial land uses. Implementation of the proposed plan would facilitate new development in locations and/or specific design elements that require consistency

with regulations and proposed plan design standards intended to protect public safety. City regulations and standards require that public improvement plans and building plans for individual developments incorporate design requirements such as curbs, gutters, handicap access, adequate Fire Department access, and other measures to improve vehicle, bicycle, and pedestrian safety.

The proposed intersection of the new public street would be constructed across the NCRA/SMART rail tracks. As discussed above, the California Public Utilities Commission approved the conversion of the private at-grade roadway crossing at mile 70.85 to a public roadway crossing. The purpose of this action was to anticipate redevelopment of the plan area by providing adequate and safe ingress and egress with the anticipated resumption of freight and/or passenger rail traffic. The current access point is located approximately midway between horizontal curves along the rail tracks and thus maximizes sight distance in both directions. In addition, the entry point provides adequate distance between the intersection proposed for the plan area and the neighboring Montage Healdsburg development project, based on the City's standards for new public streets and intersections and the driveway entrance to the future fire substation.

The proposed area plan would include design standards. Future proposed development projects would be designed with sidewalks, pedestrian walkways, bus facilities, and bicycle routes to minimize potential hazards to pedestrians and bicyclists and to support these alternative transportation modes. Pedestrian facilities are included as part of the proposed plan. Therefore, impacts would be less than significant. This topic will not be further evaluated in the EIR.

Mitigation Measures

No mitigation measures have been identified at this time. Impacts associated with this topic will be further evaluated and, if necessary, mitigated in the EIR.

Cumulative Impacts

As previously noted in Section 1.6, the anticipated cumulative buildout under the General Plan could result in the construction and operation of up to 872 additional residential units, 52 mixed-use units, 339 hotel rooms, 995,975 gross square feet of industrial uses, 507,508 gross square feet of commercial space, 551,683 gross square feet of retail space, 15,000 gross square feet of mixed-use space, and 20,000 gross square feet of office uses within the City of Healdsburg. As such, implementation of identified cumulative projects in combination with the proposed plan would result in inadequate emergency access or conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system or with a congestion management plan establishing level of service standards and travel demand measures for designated roads or highways. This is a potentially significant cumulative transportation/traffic impact and, thus, will be further evaluated in the EIR.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
17. Utilities and Service Systems <i>Would the project:</i>				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
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?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

Existing Conditions

Although the plan area is vacant and undeveloped, the City of Healdsburg currently provides the plan area water, sewer, and electrical services.

Environmental Evaluation

Would the project:

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

Less than significant impact. The City of Healdsburg owns and operates sewage collection, treatment, and disposal facilities that would serve the plan area. The City's wastewater treatment

plant (WWTP) is located approximately one mile southwest of the city limits, on Foreman Lane just south of the confluence of Dry Creek and the Russian River. The WWTP is designed to accommodate a maximum daily flow of 4.0 million gallons per day (mgd), and a permitted dry-weather capacity of 1.4 mgd. As discussed in the City General Plan EIR, the unused capacity available for new development and growth under General Plan buildout is a minimum of 0.42 mgd.

New development contemplated by the proposed plan would increase demand on wastewater treatment facilities. However, the proposed plan contemplates development in a manner consistent with the General Plan. Thus, demands placed on the wastewater collection and treatment system would be consistent with the demands generated at General Plan buildout. Therefore, the WWTP would have sufficient capacity.

New development would also continue to comply with all provisions of waste discharge permits, which regulates discharges throughout the City. In addition, the City will continue to implement NPDES requirements, including requirements that businesses implement BMPs. Therefore, the proposed development within the plan area would not exceed the wastewater treatment requirements and impacts would be less than significant. This topic will not be further evaluated in the EIR.

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

Less than significant impact. As discussed in impacts 17a) and 17d), future projects within the plan area can be served with potable water and wastewater services by the City of Healdsburg without needing to expand an existing treatment facility. Water and sewer infrastructure would be extended to the site in coordination with the prior approved Montage Healdsburg development project and associated public improvement plans for improvements to Healdsburg Avenue. Consistent with environmental review conducted for the Montage Healdsburg development project, construction activities to serve the plan area would not result in significant environmental impacts. Future projects would not require the construction of new water or wastewater treatment facilities or expansion of existing facilities, and impacts would be less than significant. This topic will not be further evaluated in the EIR.

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 majority of the plan area is located on flat ground or relatively gentle topography. The plan area underwent mass grading to establish positive sheet flow drainage towards Healdsburg Avenue. Site drainage currently sheet flows in a southeasterly direction towards a drainage ditch along the eastern side of the plan area, parallel to the NCRA train track. In addition, an on-site collection, retention, and discharge drainage system was constructed to improve the overall quality of stormwater runoff.

The proposed plan contemplates new residential and commercial uses to redevelop the site. Future grading would be minimal, consisting of mainly minor cuts and fills necessary for road improvements,

parking areas, and building pads as well as site drainage. The new development would likely increase impervious surfaces; however, new development would incorporate General Plan policies that would reduce the quantities of stormwater runoff, and consequently reduce the need for additional stormwater facilities.

The State of California administers various aspects of the NPDES General Construction Permit. Given the size of the plan area and proposed uses, a SWPPP would be required to reduce stormwater discharges and prepared in compliance with the General Construction Permit. In addition, BMPs to control pollutants would be implemented through site design for proposed projects.

On-site stormwater detention and treatment would be in compliance with the Sonoma County Standard Urban Storm Water Mitigation Plan (SUSMP) manual. In accordance with C.3 requirements, peak runoff flows would be detained during peak storm events and released at a rate no greater than the pre-development peak runoff flows. This would ensure that downstream drainage facilities are not inundated by project-related runoff, which precludes the need for new or expanded facilities. Impacts would be less than significant. This topic will not be further evaluated in the EIR.

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 City of Healdsburg's water system is supplied from three well fields: one on Dry Creek with three operational wells and two on the Russian River with eight operational wells. The plan area is located within the City's service area; mixed-use development has been planned consistent with the General Plan (sub-area D), and increased water demand from buildout was accounted for in the City's Urban Water Management Plan (Table IV.P-4). Consistent with the analysis of projected water demand contained in the management plan for the City service area, the City's existing water rights provide sufficient water supplies to serve the plan area. Therefore, impacts would be less than significant. This topic will not be further evaluated in the EIR.

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

Less than significant impact. The City owns and operates sewage collection, treatment, and disposal facilities that would serve the plan area. The City's wastewater treatment plant (WWTP) is designed to accommodate a maximum daily flow of 4.0 mgd, and a permitted dry-weather capacity of 1.4 mgd. As discussed in impact 17a), above, the unused capacity available for new development and growth under General Plan buildout is a minimum of 0.42 mgd.

New development proposed in the plan area would increase demand on wastewater treatment facilities. However, the proposed plan contemplates development in a manner consistent with the City General Plan. Thus, demands placed on the wastewater collection and treatment system would be consistent with the demands generated at General Plan buildout. Therefore, the WWTP would

have sufficient capacity and impacts would be less than significant. This topic will not be further evaluated in the EIR.

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

Less than significant impact. Redwood Empire Disposal collects solid waste and hauled to the Healdsburg Transfer Station. The transfer station is currently permitted to accept 435 tons per day (tpd) and accepts approximately 206 tpd. The estimated increase in solid waste generated at assumed General Plan buildout is estimated at 15.8 tpd. Consistent with the General Plan, the plan area contemplates to redevelop the vacant site with new land uses. Therefore, the transfer station has sufficient permitted capacity to accommodate solid waste disposal needs associated with new development.

From the transfer station, solid waste is transported to four landfills available to Sonoma County. As discussed in the General Plan EIR, landfill facilities have a remaining permitting capacity of more than 22 million tons (Table IV.P-5). Therefore, landfills servicing the plan area would have sufficient permitted capacity to accommodate future development, and impacts would be less than significant. This topic will not be further evaluated in the EIR.

g) Comply with federal, State, and local statutes and regulations related to solid waste?

No impact. The City requires future development projects to comply with applicable federal, State, and local regulations related to solid waste. Since development under the proposed plan would be consistent with General Plan guidance and regulations, it also would not impede the ability of the City to meet waste diversion requirements or cause the City to violate other applicable federal, State, and local regulations related to solid waste. No impact would occur. This topic will not be further evaluated in the EIR.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

As previously noted in Section 1.6, the anticipated cumulative buildout under the General Plan could result in the construction and operation of up to 872 additional residential units, 52 mixed-use units, 339 hotel rooms, 995,975 gross square feet of industrial uses, 507,508 gross square feet of commercial space, 551,683 gross square feet of retail space, 15,000 gross square feet of mixed-use space, and 20,000 gross square feet of office uses within the City of Healdsburg. However, implementation of the aforementioned identified cumulative projects in combination with the proposed plan would not exceed water supplies, landfill capacity, or wastewater treatment capacity or requirements of the applicable Regional Water Quality Control Board or require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. Thus, the cumulative utilities and service systems impact would be less than significant. This cumulative topic will not be further evaluated in the EIR.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
18. 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?	☐	☒	☐	☐
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)?	☒	☐	☐	☐
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

Environmental Evaluation

- 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 with mitigation incorporated. As described in Section 2.4, Biological Resources, the proposed plan would not result in significant adverse environmental impacts to wildlife or plant species. In addition, the proposed plan would not adversely affect geology/soils or hydrology/water quality. With implementation of MMs BIO-1, BIO-2, CUL-1, CUL-2, and CUL-3, the proposed plan would not degrade the quality of the environment at a project- or cumulative-level in terms of biological resources, geology/soils, hydrology/water quality, or cultural resources.

- 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. The combined effects of past, current, and future projects in combination with the proposed plan could result in significant cumulative impacts related to aesthetics, air quality, GHG emissions, noise, and transportation/traffic. As such, the proposed plan could make a cumulatively considerable contribution to related cumulative environmental impacts. This would be a potentially significant cumulative impact related to aesthetics, air quality, GHG emissions, noise, and transportation/traffic. These cumulative topics will be further evaluated in the EIR.

- 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 plan would not affect public services, utilities, recreation, mineral resources, land use planning, agriculture/forestry resources, or population/housing balance. With implementation of the mitigation measures discussed in the Section 2.7, Hazards and Hazardous Materials, the proposed plan would also not expose human beings to significant risks related to hazards/hazardous materials. Therefore, with implementation of Mitigation Measures HAZ-1 and HAZ-2, the proposed plan would not cause direct or indirect substantial adverse effects on human beings at a project- or cumulative-level in terms of public services, utilities, recreation, mineral resources, land use, agriculture/forestry resources, population/housing, or hazards/hazardous materials.

However, the proposed plan could cause substantial adverse aesthetics/visual quality effects with respect to views, light, and glare within the plan area and surrounding areas. The proposed plan could also make sizable contributions to traffic, noise, air quality, and GHG emissions. Thus, there would be a potentially significant impact related to direct or indirect substantial adverse effects on human beings at a project- or cumulative-level in terms of aesthetics, light and glare; transportation/traffic; noise; air quality; and GHG emissions. These topics will be further evaluated in the EIR.

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SECTION 3: LIST OF PREPARERS

FirstCarbon Solutions
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A.3 - EIR Scoping Meeting Presentation



City of Healdsburg North Entry Area Plan

Environmental Impact Report Public Scoping Meeting June 28, 2018

Healdsburg City Council Chamber
401 Grove Street, Healdsburg, CA 95448
6:00 p.m.

WELCOME

- Please sign in at table near entrance
- Pick up copy of meeting materials
- Purpose of Meeting is to receive public input regarding the scope of the EIR for the North Entry Area Plan
- To provide oral comments, please raise your hand and you'll be called upon to come up to the microphone – comment period will follow a brief presentation
- To provide comments in writing:
 - May use the provided comment sheet;
 - Drop off at the end of the meeting; and/or
 - Send comments to City of Healdsburg (via email or regular mail) by July 23, 2018.

AGENDA

- Introductions
- Purpose of this EIR Scoping Meeting
- North Entry Area Plan Location, Overview, and History
- California Environmental Quality Act (CEQA) Process
- Initial Study Findings/Mitigation Measures
- Topics to be included in the Focused EIR
- Next Steps for Area Plan and EIR
- Receive Public Comments

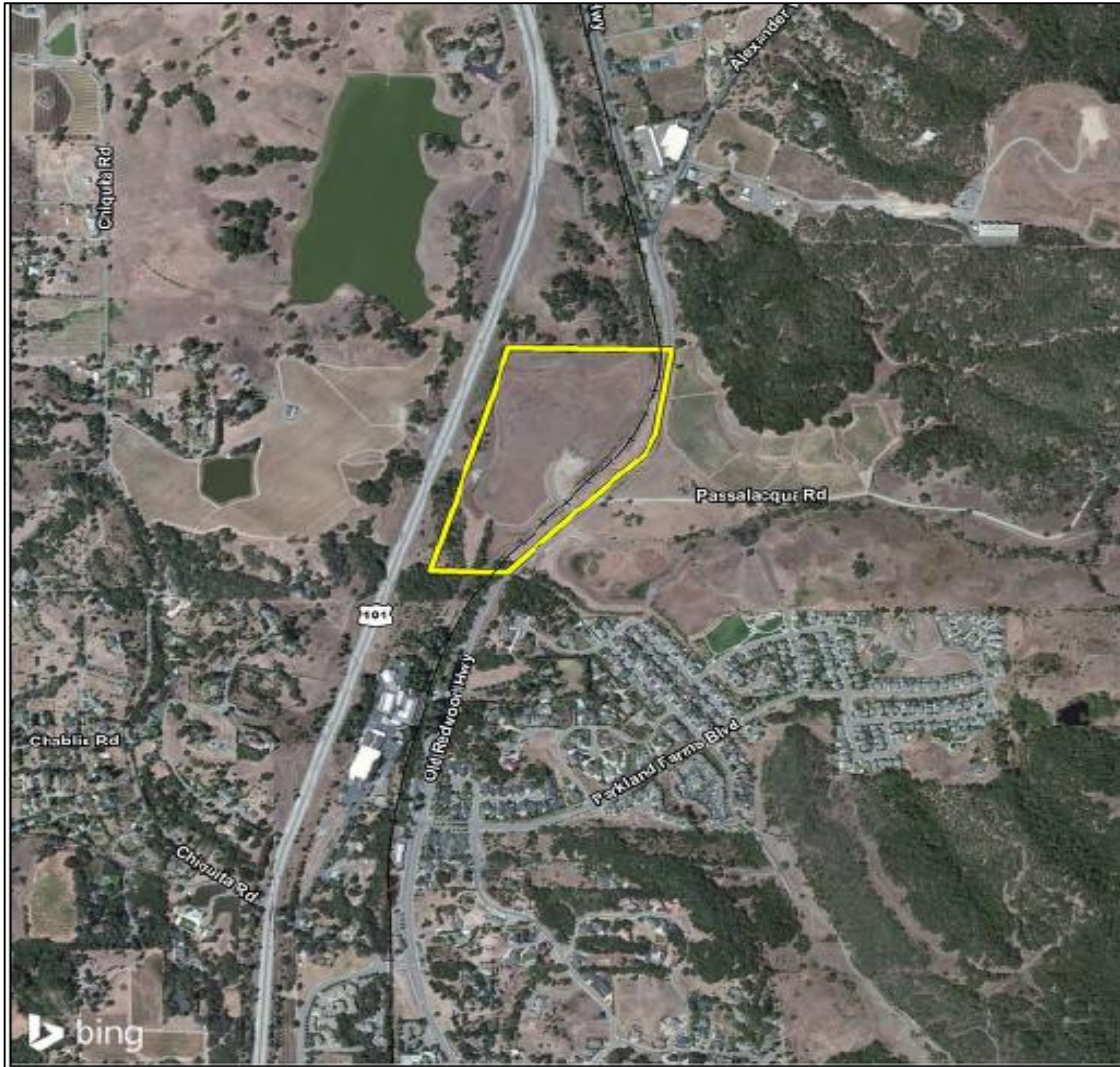
INTRODUCTIONS

- **Maya DeRosa**, City of Healdsburg,
Director of Planning & Building Services
- **Linda Ruffing**, Planning Consultant,
North Entry Area Plan Project Manager
for City of Healdsburg
- **Kelsey Bennett**, First Carbon Solutions,
North Entry Area Plan Environmental
Impact Report Project Manager

PURPOSE OF MEETING

The purpose of this meeting is to receive public input regarding the scope of the Environmental Impact Report (EIR) that will be prepared to assess the potential environmental impacts of the proposed Healdsburg North Entry Area Plan.

NORTH ENTRY AREA PLAN LOCATION



- General Plan policies & purpose of North Entry Area Plan
- North Entry Area Plan boundaries

NORTH ENTRY AREA PLAN HISTORY



- Prior Lumberyard Operation-Aerial Photograph
- Mill closed in 2000
- Contaminated soils removed and site regraded in 2004

NORTH ENTRY AREA PLAN OVERVIEW

- Plan Area encompasses 32.17 acres
- Plan would establish guiding principles and a design framework for development of approximately 30-acre site owned by Comstock Healdsburg, LLC along west side of Healdsburg Avenue
- Approximately 18 acres of Comstock property is considered developable
- General Plan assigns a “Mixed Use” land use designation to property
- North Area Entry Plan documents are available at:

<http://www.ci.healdsburg.ca.us/842/North-Entry-Area-Plan>

NORTH ENTRY AREA PLAN PUBLIC MEETINGS

- March 28, 2018 - Open House
- March 28, 2018 - Planning Commission Workshop #1
- May 8, 2018 - Planning Commission Workshop #2
- Planning Commission workshop materials available at:
<http://www.ci.healdsburg.ca.us/842/North-Entry-Area-Plan>
- September 2018 - North Entry Area Plan available to public

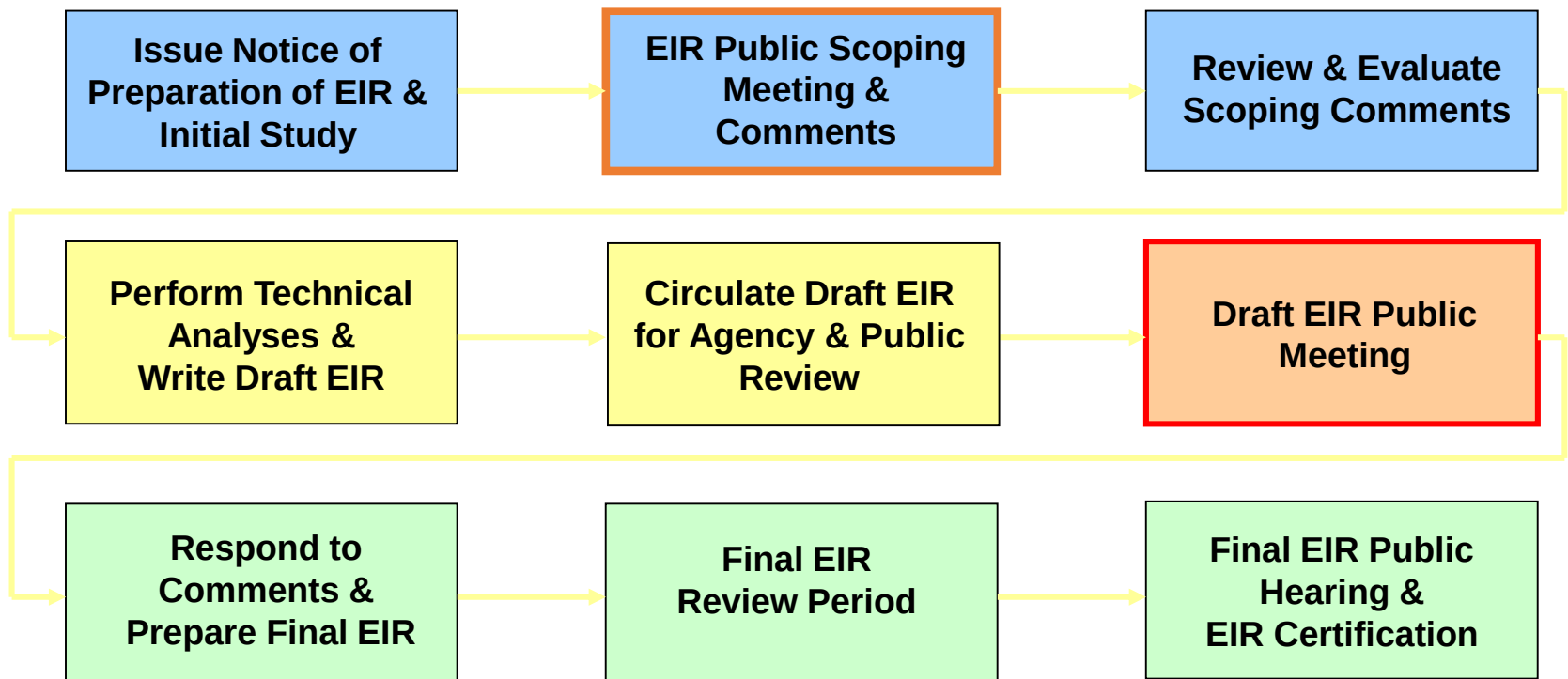


NORTH ENTRY AREA PLAN DEVELOPMENT ASSUMPTIONS

- Area Plan contemplates a mixed-use community
 - Comstock proposal includes: senior community with independent living units, an assisted living facility and memory care center; multi-family apartments; a boutique hotel; mix of commercial retail and office uses
- Proposed Area Plan Land Use Types and Buildout Assumptions for EIR Analysis

Land Use Type	Buildout Assumptions
Residential	290 units
Nonresidential	200,000 gross square feet

ENVIRONMENTAL REVIEW PROCESS



17 ENVIRONMENTAL TOPICS ANALYZED IN INITIAL STUDY

- Aesthetics
- Agriculture & Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards & Hazardous Materials
- Hydrology & Water Quality
- Land Use & Planning
- Mineral Resources
- Noise
- Population & Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities & Service Systems

SUMMARY OF INITIAL STUDY FINDINGS

Proposed Area Plan would not result in potentially significant environmental impacts, except with regard to the following 8 topics:

1. **AESTHETICS** (effect on scenic vista, visual character/quality, & light/glare)
2. **AIR QUALITY** (meeting air quality standards; contribution of criteria air pollutants; exposure to pollutant concentrations)
3. **BIOLOGICAL RESOURCES** (effect on wetlands as defined by Clean Water Act Section 404)
4. **CULTURAL RESOURCES** (change in significance of historical, archeological, tribal cultural, & paleontological resources; disturb burials)
5. **GREENHOUSE GAS EMISSIONS** (generate GHG emissions; GHG reduction plan consistency; use of energy)
6. **HAZARDS & HAZARDOUS MATERIALS** (release of hazardous materials; interfere with emergency response/evacuation plan; exposure to wildland fire risk)
7. **NOISE** (exposure to noise and groundborne vibration levels in excess of standards; increase in permanent or temporary noise levels)
8. **TRANSPORTATION/TRAFFIC** (meeting established measures of circulation effectiveness & congestion management; result in inadequate emergency access)

CUMULATIVE IMPACTS (aesthetics, air quality, GHG emissions, noise, transportation)

MITIGATION MEASURES IN INITIAL STUDY

- North Entry Area Plan Initial Study provides mitigation for potentially significant environmental impacts, reducing them to a less-than-significant impact level, for the following 3 topic areas:
 - **BIOLOGICAL RESOURCES**
 - **CULTURAL RESOURCES**
 - **HAZARDS & HAZARDOUS MATERIALS**

MITIGATION MEASURES IN INITIAL STUDY

BIOLOGY

- BIO-1: conduct pre-construction surveys for migratory birds and nesting raptors
- BIO-2: delineate federally protected wetlands and implement permitting conditions

CULTURAL

- CUL-1: stop work and monitor if historical and archeological resources discovered
- CUL-2: stop work and monitor if paleontological resources discovered
- CUL-3: stop work and monitor if burials and tribal cultural resources discovered

HAZARDS & HAZARDOUS MATERIALS

- HAZ-1: implement dust control measures during construction activities
- HAZ-2: provide for secondary emergency site access

TOPICS TO BE ADDRESSED IN EIR

The North Entry Area Plan EIR will analyze at both the project and cumulative level, and mitigate where needed, the following 5 remaining potentially significant environmental impact topics:

- **AESTHETICS**
- **AIR QUALITY**
- **GREENHOUSE GAS EMISSIONS**
- **NOISE**
- **TRANSPORTATION/TRAFFIC**

NEXT STEPS FOR NORTH ENTRY AREA PLAN & EIR

- Based on community and Planning Commission input received at workshops in March and May, the North Entry Area Plan is being drafted and will be released for public review in September
- Draft EIR for North Entry Area Plan will be released for public review in autumn 2018
- Additional community workshops and public hearings before the Planning Commission and City Council
- EIR certification and North Entry Area Plan adoption in early 2019

PUBLIC COMMENT PROCESS

- Please focus comments on issues that should be addressed in the EIR
- Raise your hand to be called upon
- Speak into the microphone and clearly state your name
- A 3-5 minute time limit per person will be established for verbal comments depending on how many persons wish to speak
- Use comment forms for written input

WRITTEN COMMENTS

- Comment forms are available at this meeting for written comments. You may submit written comments at this time or mail the comment form to the City.
- Mail or email comments by **July 23, 2018** to:
Maya DeRosa, Planning & Building Director
City of Healdsburg
401 Grove Street
Healdsburg, CA 95448
mderosa@ci.healdsburg.ca.us
- Thank you for your EIR scoping comments. All comments will be reviewed and considered in preparation of the EIR.
- North Area Entry Plan documents are available at:
<http://www.ci.healdsburg.ca.us/842/North-Entry-Area-Plan>

PUBLIC COMMENTS

THANK YOU FOR YOUR PARTICIPATION

Appendix B: Transportation-Traffic Supporting Information

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B.1 - Trip Generation and Distribution Assumptions Memorandum

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Memorandum

Date: August 6, 2018

Project: HEA068

To: Linda Ruffing
City of Healdsburg

From: Dalene J. Whitlock
dwhitlock@w-trans.com
Cameron Nye
cnye@w-trans.com

Subject: Memorandum of Assumptions for Analysis of Proposed North Entry Area Specific Plan

W-Trans has entered a contract to prepare a traffic impact study for the North Entry Area Plan in Healdsburg, California. To ensure that the resulting analysis will provide adequate information and reflect your policies accurately, it would be appreciated if you would review the following assumptions that we anticipate applying for our analysis along with our proposed scope of services, and provide comments regarding their adequacy.

Project Description

The North Entry Area Plan (proposed plan) would establish more specific guiding principles and a design framework for development of the Comstock property, as an amendment of the Healdsburg 2030 General Plan Land Use Element. The plan area was historically used as a lumber mill, storage, or fabrication facility since the 1940s. The Comstock property comprises 30.16 contiguous acres of land between U.S. Highway 101 and the NCRA railroad right-of-way, with an additional 2.17 acre strip between the NCRA right-of-way and Healdsburg Avenue.

An average of 1,500 gross square feet is assumed for the proposed residential units to account for a range of unit sizes. Thus, total planned building area of up to 435,000 gross square feet of residential and 200,000 gross square feet of nonresidential would constitute a total anticipated building area of 635,000 gross square feet. This would include multi-story buildings on the developable 18-acre area (note that hillside areas would remain undeveloped). The proposed development would allow for approximately 12 acres of open and undeveloped land to remain within the developable property. City development standards would allow buildings in the plan area up to a maximum height of 50 feet. The North Entry Area Plan would encourage stepping of heights, from lower building heights along Healdsburg Avenue to taller buildings toward the hillside portions of the plan area.

Trip Generation

The anticipated trip generation for the proposed project was estimated using standard rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual*, 10th Edition, 2017. The trip generation potential of the project as planned were developed using the published standard rates for Multifamily Housing (Land Use #220), Hotel (Land Use #310), General Office (Land Use #710) and Specialty Retail Center (Land Use #826) as these descriptions most closely match the proposed uses. The proposed project is expected to generate an average increase in trip generation of 4,930 trips per day, including 259 a.m. peak hour trips and 351 trips during the p.m. peak hour. These results are summarized in Table 1.

Table 1 – Trip Generation Summary

Land Use	Units	Daily		AM Peak Hour				PM Peak Hour			
		Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Proposed											
Multifamily Housing	290 units	7.32	2,123	0.46	133	31	102	0.56	162	102	60
Hotel	130 rms	8.36	1,087	0.39	51	40	11	0.48	62	19	43
General Office Building	40 ksf	9.74	390	1.16	46	40	6	1.15	46	7	39
Specialty Retail Center	30 ksf	44.32	1,330	0.96	29	18	11	2.71	81	36	45
Net Change		4,930		259 129 130				351 164 187			

Note: rms = rooms; ksf = 1,000 square feet

Trip Distribution

The pattern suggested to allocate new project trips to the street network was determined by reviewing existing turning movements at the study intersections, employment patterns for residents of Healdsburg as indicated by the 2000 Census, and engineering judgement. Based on the applied assumptions shown in Table 2-5, the following distribution assumptions are proposed for each proposed land use.

Table 2 – Multifamily Housing Trip Distribution Assumptions

Route	Percent	Daily Trips	AM Peak Hour Trips	PM Peak Hour Trips
To/from the west via Dry Creek Road	5%	106	7	8
To/from the east via March Avenue	10%	212	13	16
To/from the south via Grove Street	10%	212	13	16
To/from the south via Healdsburg Ave	10%	212	13	16
To/from the north via Healdsburg Ave	15%	318	20	24
To/from the south via US 101	50%	1,062	67	81
TOTAL	100%	2,123	133	162

Table 3 – Hotel Trip Distribution Assumptions

Route	Percent	Daily Trips	AM Peak Hour Trips	PM Peak Hour Trips
To/from the west via Dry Creek Road	15%	163	8	9
To/from the east via March Avenue	5%	54	2	3
To/from the south via Grove Street	5%	54	2	3
To/from the south via Healdsburg Avenue	15%	163	8	9
To/from the north via Healdsburg Ave	5%	54	3	3
To/from the south via US 101	55%	599	28	35
TOTAL	100%	1,087	51	62

Table 4 – General Office Building Trip Distribution Assumptions

Route	Percent	Daily Trips	AM Peak Hour Trips	PM Peak Hour Trips
To/from the east via March Avenue	5%	19	2	2
To/from the south via Grove Street	5%	19	2	2
To/from the south via Healdsburg Avenue	15%	59	7	7
To/from the north via Healdsburg Ave	5%	20	2	2
To/from the north via US 101	20%	78	10	10
To/from the south via US 101	50%	195	23	23
TOTAL	100%	390	46	46

Table 5 – Specialty Retail Trip Distribution Assumptions

Route	Percent	Daily Trips	AM Peak Hour Trips	PM Peak Hour Trips
To/from the west via Dry Creek Road	5%	66	1	4
To/from the east via March Avenue	15%	200	4	12
To/from the south via Grove Street	5%	66	1	4
To/from the south via Healdsburg Ave	25%	333	8	20
To/from the north via Healdsburg Ave	5%	66	1	4
To/from the east via Parkland Farms Blvd	10%	133	3	8
To/from the north via US 101	5%	67	1	4
To/from the south via US 101	30%	399	10	25
TOTAL	100%	1,330	29	81

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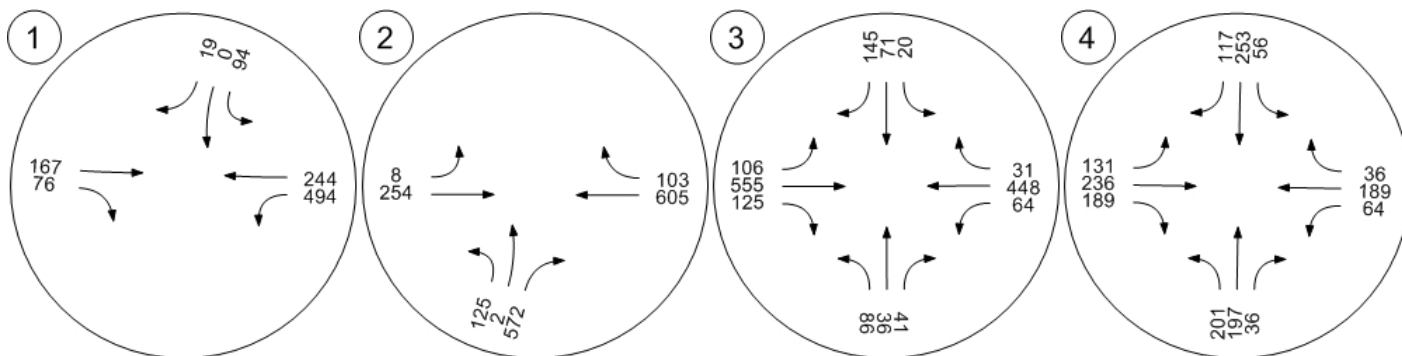
B.2 - Traffic Volume and Turning Details

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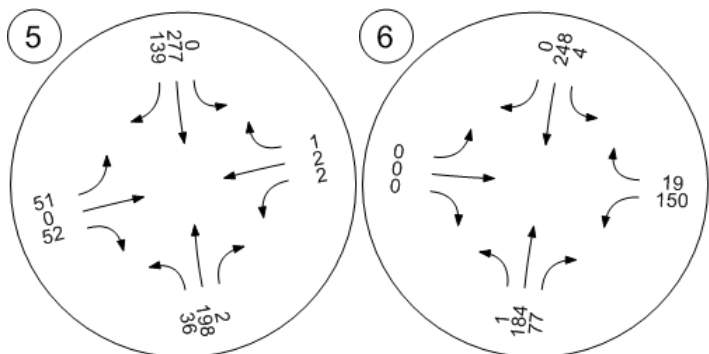
Traffic Volume



US 101 S Ramps/Dry Creek US 101 N Ramps/Dry Creek Dry Creek Rd/Grove St Dry Creek Rd-March Ave/He



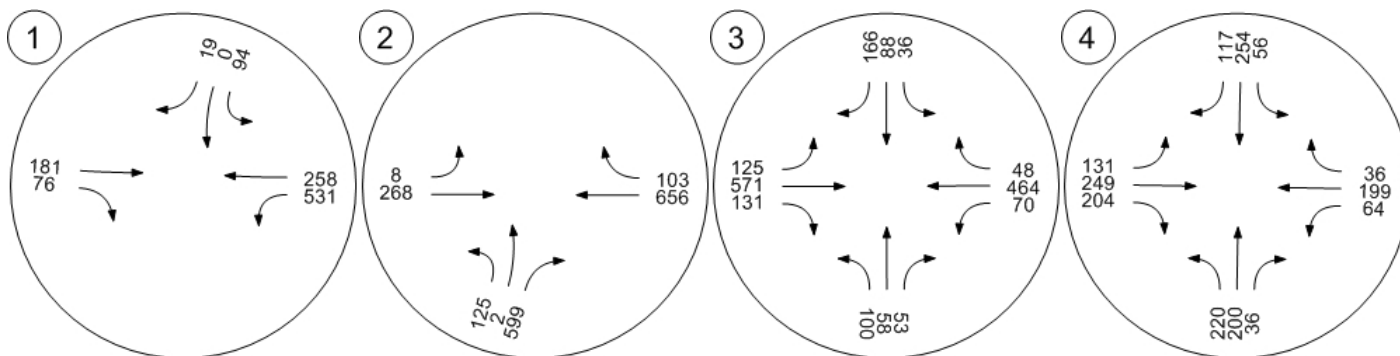
Healdsburg Ave/Grove St Healdsburg Ave/Parkland Far



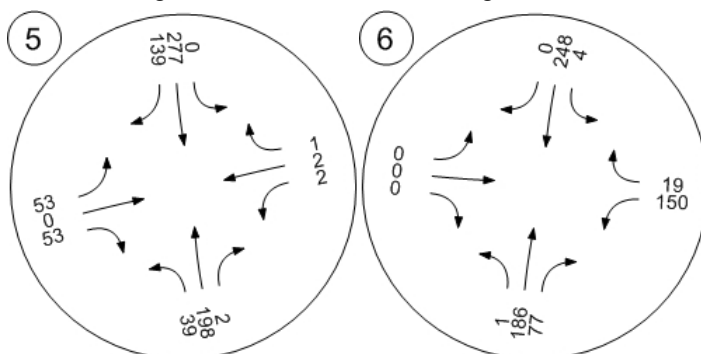
Traffic Volume



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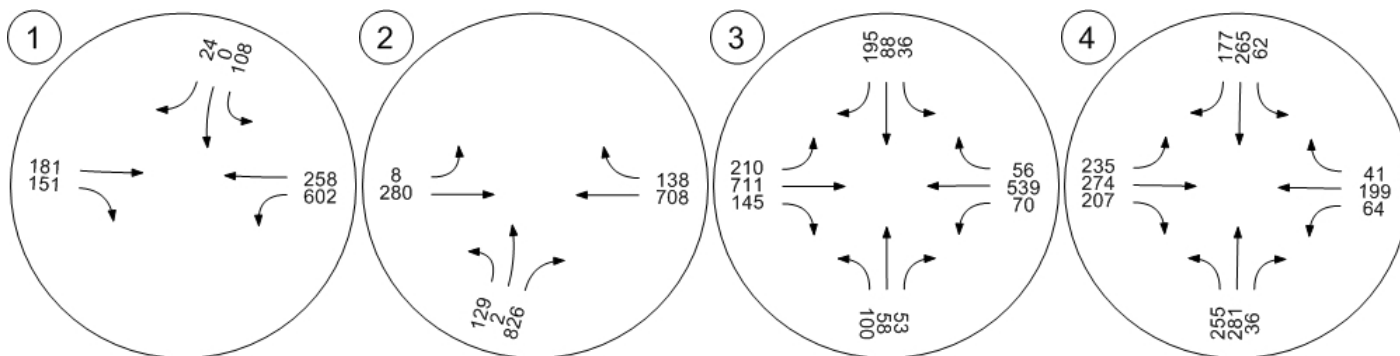
Healdsburg Ave/Grove St Healdsburg Ave/Parkland Far



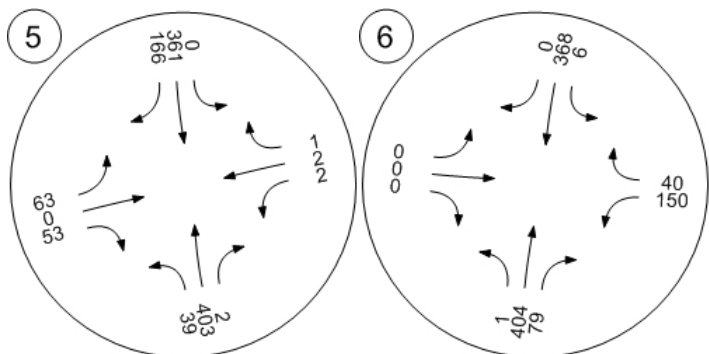
Traffic Volume



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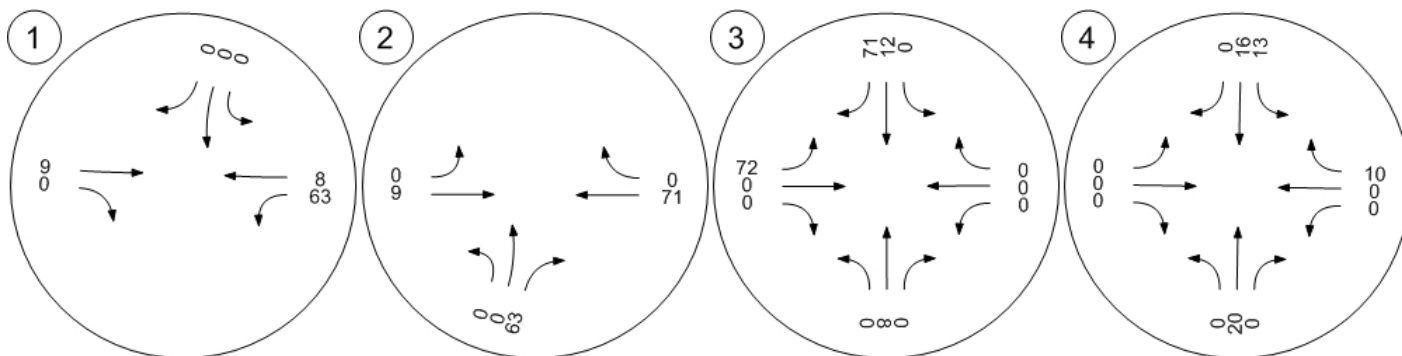
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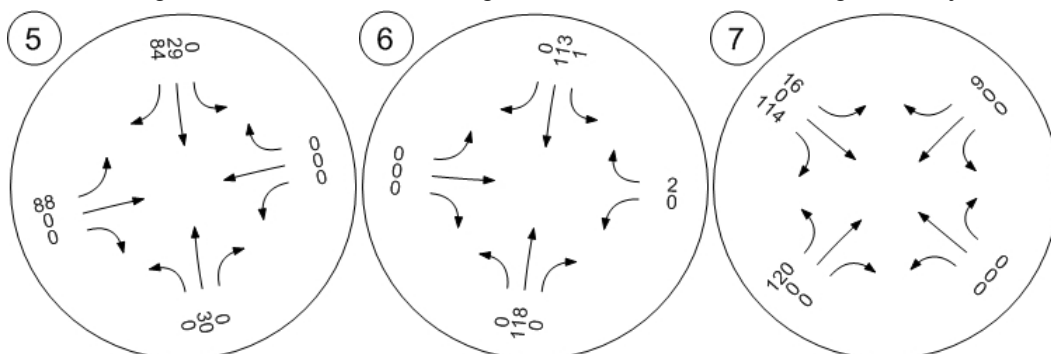
Traffic Volume - Net New Site Trips



US 101 S Ramps/Dry Creek US 101 N Ramps/Dry Creek Dry Creek Rd/Grove St Dry Creek Rd-March Ave/He



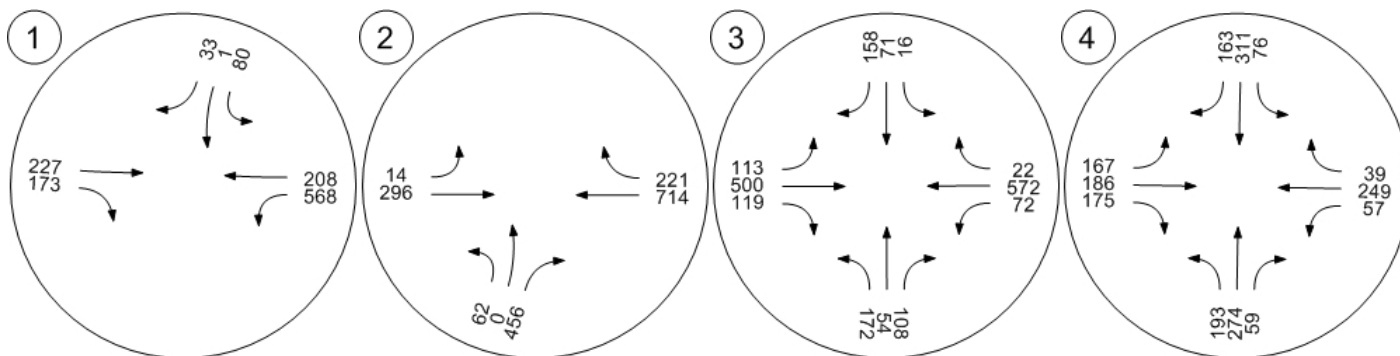
Healdsburg Ave/Grove St Healdsburg Ave/Parkland Far Healdsburg Ave/Project Acce



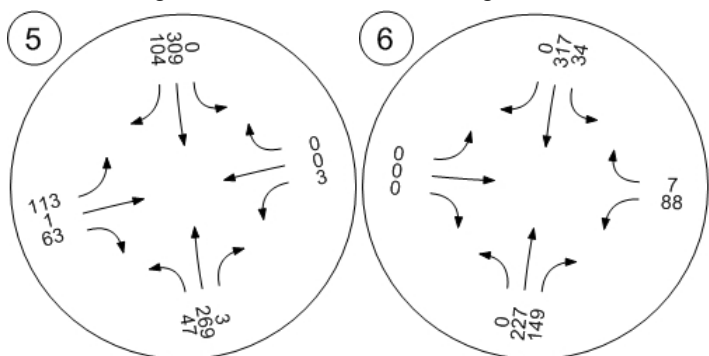
Traffic Volume



US 101 S Ramps/Dry Creek US 101 N Ramps/Dry Creek Dry Creek Rd/Grove St Dry Creek Rd-March Ave/He



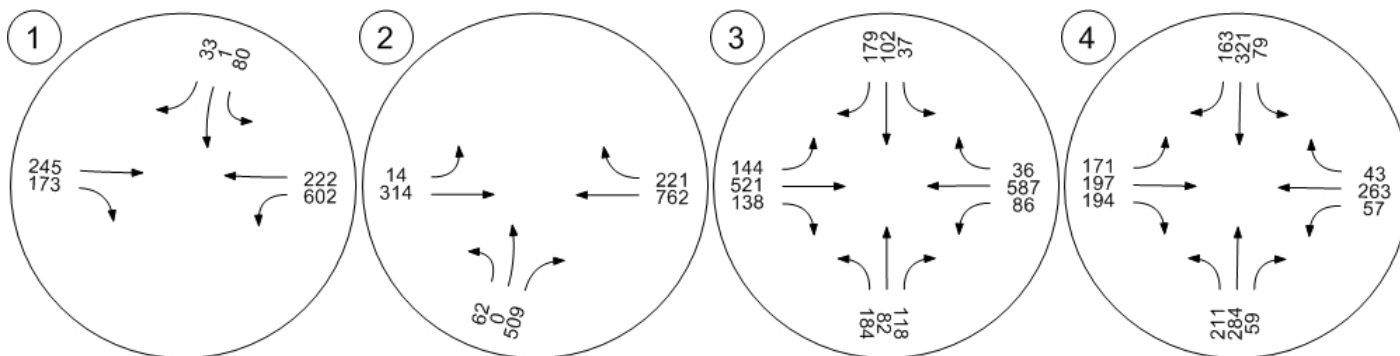
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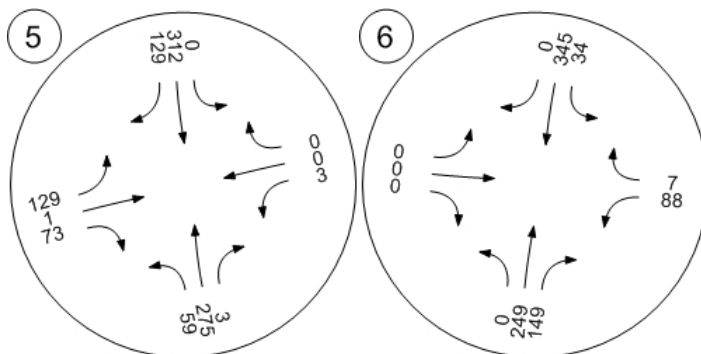
Traffic Volume



US 101 S Ramps/Dry Creek US 101 N Ramps/Dry Creek Dry Creek Rd/Grove St Dry Creek Rd-March Ave/He



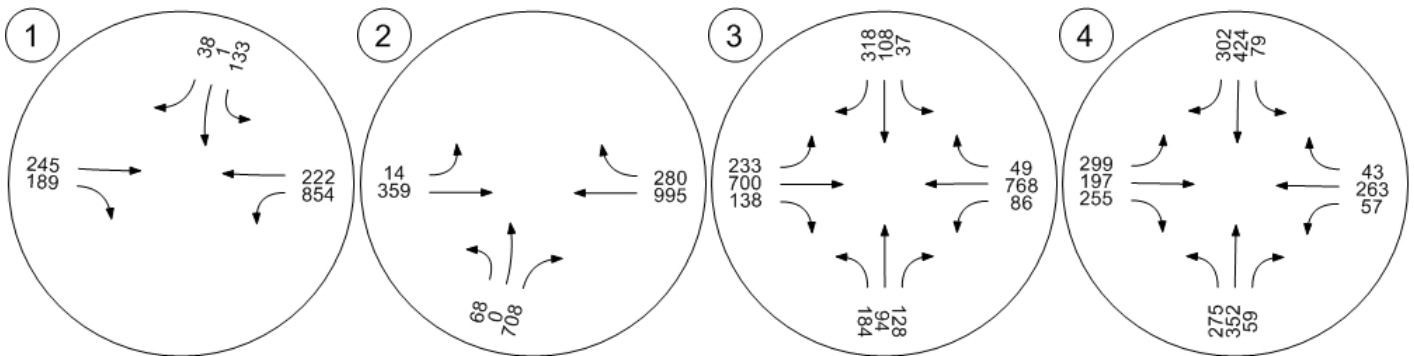
Healdsburg Ave/Grove St Healdsburg Ave/Parkland Far



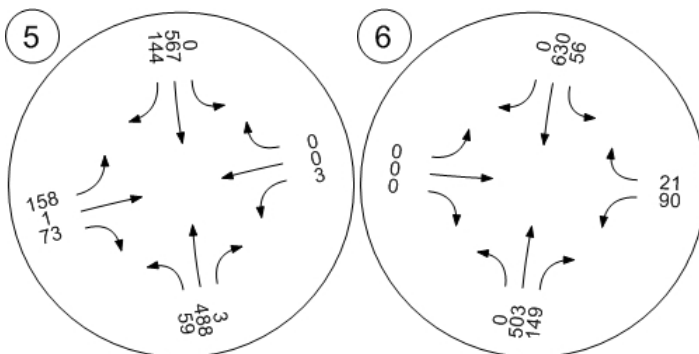
Traffic Volume



US 101 S Ramps/Dry Creek US 101 N Ramps/Dry Creek Dry Creek Rd/Grove St Dry Creek Rd-March Ave/He



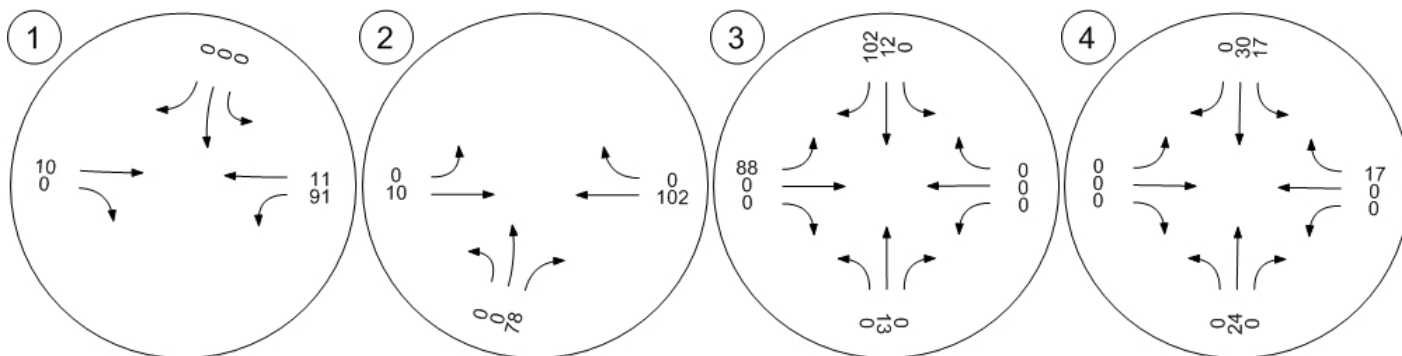
Healdsburg Ave/Grove St Healdsburg Ave/Parkland Far



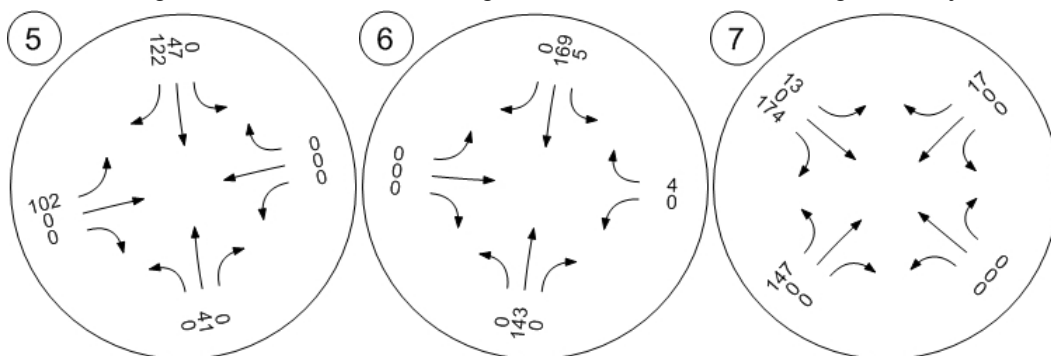
Traffic Volume - Net New Site Trips



US 101 S Ramps/Dry Creek US 101 N Ramps/Dry Creek Dry Creek Rd/Grove St Dry Creek Rd-March Ave/He



Healdsburg Ave/Grove St Healdsburg Ave/Parkland Far Healdsburg Ave/Project Acce



B.3 - Level of Service Technical Materials

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Intersection Level Of Service Report

Intersection 1: US 101 S Ramps/Dry Creek Rd

Control Type:	Two-way stop	Delay (sec / veh):	591.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			55.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	0	0	0	94	0	19	0	167	76	494	244	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	0	0	0	94	0	19	0	167	76	494	244	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9100	0.9100	0.9100	1.0000	0.9100	0.9100	0.9100	0.9100	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]	0	0	0	26	0	5	0	46	21	136	67	0
Total Analysis Volume [veh/h]	0	0	0	103	0	21	0	184	84	543	268	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	3	0	0
Two-Stage Gap Acceptance		No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	1.90	0.00	0.03	0.00	0.00	0.00	0.42	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	588.77	591.23	9.80	0.00	0.00	0.00	9.77	0.00	0.00
Movement LOS				F	F	A		A	A	A	A	
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	9.98	9.98	0.08	0.00	0.00	0.00	4.66	4.66	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	249.58	249.58	2.10	0.00	0.00	0.00	116.53	116.53	0.00
d_A, Approach Delay [s/veh]	0.00			490.72			0.00			6.54		
Approach LOS	A			F			A			A		
d_I, Intersection Delay [s/veh]	54.99											
Intersection LOS	F											

Intersection Level Of Service Report

Intersection 2: US 101 N Ramps/Dry Creek Rd

Control Type:	Two-way stop	Delay (sec / veh):	51.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.662

Intersection Setup

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek 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	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek Road		
Base Volume Input [veh/h]	125	2	572	0	0	0	8	254	0	0	605	103
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	125	2	572	0	0	0	8	254	0	0	605	103
Peak Hour Factor	0.9000	0.9000	0.9000	1.0000	1.0000	1.0000	0.9000	0.9000	1.0000	1.0000	0.9000	0.9000
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]	35	1	159	0	0	0	2	71	0	0	168	29
Total Analysis Volume [veh/h]	139	2	636	0	0	0	9	282	0	0	672	114
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	2	0	0	0
Two-Stage Gap Acceptance	No			
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.66	0.01	0.84	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	51.40	51.11	29.40	0.00	0.00	0.00	9.37	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	F	D				A	A			A	A
95th-Percentile Queue Length [veh]	4.14	4.14	9.64	0.00	0.00	0.00	1.57	1.57	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	103.55	103.55	240.91	0.00	0.00	0.00	39.36	39.36	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	33.39			0.00			0.29			0.00		
Approach LOS	D			A			A			A		
d_I, Intersection Delay [s/veh]	14.04											
Intersection LOS	F											

Intersection Level Of Service Report

Intersection 3: Dry Creek Rd/Grove St

Control Type: Signalized
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 24.5
 Level Of Service: C
 Volume to Capacity (v/c): 0.916

Intersection Setup

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
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	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	75.00	100.00	265.00	75.00	100.00	75.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	86	36	41	20	71	145	106	555	125	64	448	31
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	14	0	0	67	0	0	27	0	0	3
Total Hourly Volume [veh/h]	86	36	27	20	71	78	106	555	98	64	448	28
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
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]	25	10	8	6	20	22	30	159	28	18	129	8
Total Analysis Volume [veh/h]	99	41	31	23	82	90	122	638	113	74	515	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	2			0			0			3		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	67
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	3	6	0	3	6	0
Maximum Green [s]	0	15	0	0	15	0	10	30	0	10	30	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0
Split [s]	0	29	0	0	29	0	13	34	0	13	34	0
Vehicle Extension [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	7	0	0	8	0	0	8	0	0	8	0
Pedestrian Clearance [s]	0	16	0	0	15	0	0	9	0	0	8	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.6	0.0	0.0	1.6	0.0	1.0	2.0	0.0	1.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	L	C	C	L	C	R
C, Cycle Length [s]	67	67	67	67	67	67	67	67	67
L, Total Lost Time per Cycle [s]	3.60	3.60	3.60	3.00	4.00	4.00	3.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.60	1.60	1.60	1.00	2.00	2.00	1.00	2.00	2.00
g_i, Effective Green Time [s]	25	25	25	6	27	27	4	25	25
g / C, Green / Cycle	0.38	0.38	0.38	0.09	0.41	0.41	0.06	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.37	0.02	0.27	0.08	0.23	0.23	0.05	0.31	0.02
s, saturation flow rate [veh/h]	380	1422	730	1597	1676	1588	1597	1676	1395
c, Capacity [veh/h]	235	536	335	150	684	648	90	622	517
d1, Uniform Delay [s]	19.16	13.30	16.21	29.77	15.23	15.24	31.26	19.14	13.57
k, delay calibration	0.42	0.04	0.19	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.09	0.02	2.80	3.96	3.33	3.52	6.62	12.08	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

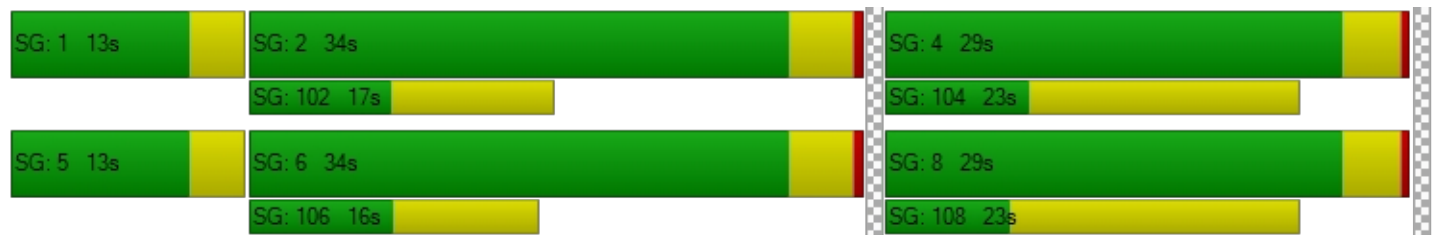
X, volume / capacity	0.60	0.06	0.58	0.81	0.56	0.56	0.82	0.83	0.06
d, Delay for Lane Group [s/veh]	28.25	13.31	19.01	33.73	18.56	18.76	37.88	31.22	13.80
Lane Group LOS	C	B	B	C	B	B	D	C	B
Critical Lane Group	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.46	0.28	2.15	2.01	4.71	4.51	1.30	8.66	0.32
50th-Percentile Queue Length [ft]	61.49	6.95	53.71	50.29	117.79	112.64	32.62	216.56	8.07
95th-Percentile Queue Length [veh]	4.43	0.50	3.87	3.62	8.27	7.99	2.35	13.49	0.58
95th-Percentile Queue Length [ft]	110.68	12.51	96.69	90.52	206.78	199.67	58.72	337.23	14.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.25	28.25	13.31	19.01	19.01	19.01	33.73	18.64	18.76	37.88	31.22	13.80
Movement LOS	C	C	B	B	B	B	C	B	B	D	C	B
d_A, Approach Delay [s/veh]	25.54			19.01			20.77			31.12		
Approach LOS	C			B			C			C		
d_I, Intersection Delay [s/veh]	24.48											
Intersection LOS	C											
Intersection V/C	0.916											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 4: Dry Creek Rd-March Ave/Healdsburg Ave

Control Type:	Signalized	Delay (sec / veh):	35.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.628

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	165.00	100.00	100.00	90.00	100.00	100.00	115.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	201	197	36	56	253	117	131	236	189	64	189	36
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	16	0	0	46	0	0	91	0	0	12
Total Hourly Volume [veh/h]	201	197	20	56	253	71	131	236	98	64	189	24
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
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]	63	62	6	18	79	22	41	74	31	20	59	8
Total Analysis Volume [veh/h]	251	246	25	70	316	89	164	295	123	80	236	30
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	6			6			5			1		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	96
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	6	0	3	6	0	3	6	0	3	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.6	0.0	3.0	3.6	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0
Split [s]	19	29	0	19	29	0	19	29	0	19	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	8	0	0	8	0	0	9	0	0	9	0
Pedestrian Clearance [s]	0	15	0	0	11	0	0	14	0	0	14	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	2.0	0.0	1.0	2.0	0.0	1.0	1.4	0.0	1.0	1.4	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	96	96	96	96	96	96	96	96	96	96	96
L, Total Lost Time per Cycle [s]	3.00	4.00	4.00	3.00	4.00	4.00	3.00	3.40	3.40	3.00	3.40
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	2.00	2.00	1.00	2.00	2.00	1.00	1.40	1.40	1.00	1.40
g_i, Effective Green Time [s]	16	38	38	5	27	27	12	33	33	6	28
g / C, Green / Cycle	0.17	0.39	0.39	0.06	0.28	0.28	0.12	0.35	0.35	0.06	0.29
(v / s)_i Volume / Saturation Flow Rate	0.16	0.08	0.08	0.04	0.12	0.13	0.10	0.18	0.09	0.05	0.16
s, saturation flow rate [veh/h]	1597	1676	1623	1597	1676	1548	1597	1676	1418	1597	1640
c, Capacity [veh/h]	267	660	639	89	474	438	195	582	492	102	474
d1, Uniform Delay [s]	39.58	19.26	19.27	44.80	28.25	28.34	41.28	24.86	22.43	44.35	29.02
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.96	0.72	0.75	13.70	2.95	3.32	9.28	3.13	1.21	12.33	4.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

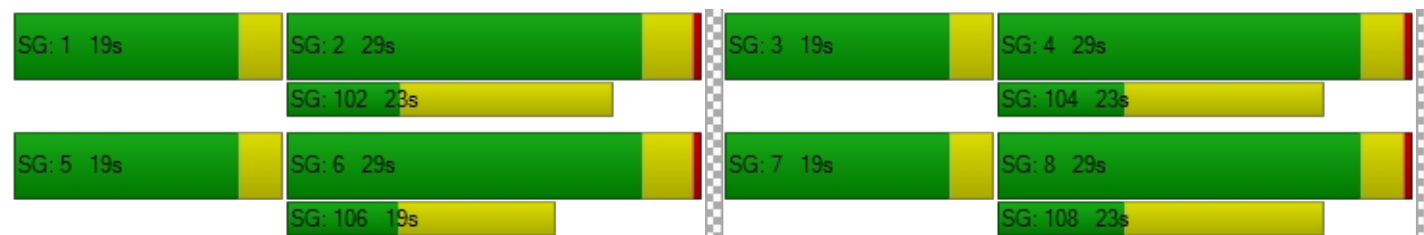
X, volume / capacity	0.94	0.21	0.21	0.78	0.44	0.45	0.84	0.51	0.25	0.78	0.56
d, Delay for Lane Group [s/veh]	54.54	19.97	20.02	58.50	31.20	31.66	50.55	27.99	23.65	56.68	33.78
Lane Group LOS	D	B	C	E	C	C	D	C	C	E	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh]	6.87	2.12	2.07	1.96	4.20	4.01	4.26	5.71	2.12	2.21	5.73
50th-Percentile Queue Length [ft]	171.77	52.91	51.72	48.96	105.00	100.36	106.49	142.68	53.07	55.29	143.35
95th-Percentile Queue Length [veh]	11.17	3.81	3.72	3.52	7.56	7.23	7.64	9.63	3.82	3.98	9.66
95th-Percentile Queue Length [ft]	279.24	95.23	93.09	88.12	189.00	180.65	191.11	240.63	95.52	99.52	241.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.54	19.99	20.02	58.50	31.36	31.66	50.55	27.99	23.65	56.68	33.78	33.78
Movement LOS	D	B	C	E	C	C	D	C	C	E	C	C
d_A, Approach Delay [s/veh]	36.61			35.41			33.43			39.08		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	35.80											
Intersection LOS	D											
Intersection V/C	0.628											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 5: Healdsburg Ave/Grove St

Control Type: Signalized
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 9.5
 Level Of Service: A
 Volume to Capacity (v/c): 0.229

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Grove St			Private Dwy		
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	1	0	0	1	0	0	1	0	1	0	0	0
Pocket Length [ft]	150.00	100.00	100.00	80.00	100.00	100.00	135.00	100.00	70.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Grove St			Private Dwy		
Base Volume Input [veh/h]	36	198	2	0	277	139	51	0	52	2	2	1
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	13	0	0	29	0	0	1
Total Hourly Volume [veh/h]	36	198	2	0	277	126	51	0	23	2	2	0
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
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]	11	62	1	0	87	39	16	0	7	1	1	0
Total Analysis Volume [veh/h]	45	248	3	0	346	158	64	0	29	3	3	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			0			0			3		
Bicycle Volume [bicycles/h]	0			1			1			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	3	6	0	3	6	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	15	30	0	0	20	0	0	15	0
Amber [s]	3.0	3.7	0.0	3.0	3.7	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	1.0	0.0
Split [s]	21	35	0	6	20	0	0	19	0	0	20	0
Vehicle Extension [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	2.1	0.0	1.0	2.1	0.0	0.0	1.6	0.0	0.0	2.2	0.0
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	3.00	4.10	4.10	3.00	4.10	4.10	3.60	3.60	3.60	4.20
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	2.10	2.10	1.00	2.10	2.10	1.60	1.60	1.60	2.20
g_i, Effective Green Time [s]	3	60	60	0	57	57	4	4	4	1
g / C, Green / Cycle	0.03	0.75	0.75	0.00	0.72	0.72	0.06	0.06	0.06	0.01
(v / s)_i Volume / Saturation Flow Rate	0.03	0.07	0.07	0.00	0.14	0.15	0.02	0.02	0.02	0.00
s, saturation flow rate [veh/h]	1774	1863	1855	1774	1863	1646	1774	1774	1516	1817
c, Capacity [veh/h]	59	1396	1390	1	1335	1180	98	98	84	16
d1, Uniform Delay [s]	38.41	2.70	2.70	0.00	3.74	3.76	36.40	36.40	36.44	39.51
k, delay calibration	0.04	0.50	0.50	0.04	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.36	0.13	0.13	0.00	0.33	0.39	0.70	0.70	0.90	5.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

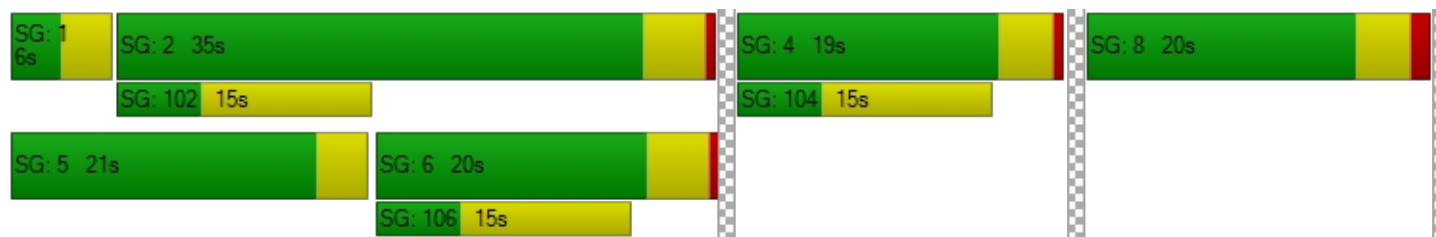
X, volume / capacity	0.76	0.09	0.09	0.00	0.20	0.20	0.33	0.33	0.35	0.39
d, Delay for Lane Group [s/veh]	45.78	2.83	2.83	0.00	4.07	4.16	37.10	37.10	37.34	45.19
Lane Group LOS	D	A	A	A	A	A	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes
50th-Percentile Queue Length [veh]	0.97	0.38	0.38	0.00	1.09	1.02	0.60	0.60	0.55	0.14
50th-Percentile Queue Length [ft]	24.26	9.46	9.45	0.00	27.20	25.53	15.07	15.07	13.76	3.53
95th-Percentile Queue Length [veh]	1.75	0.68	0.68	0.00	1.96	1.84	1.08	1.08	0.99	0.25
95th-Percentile Queue Length [ft]	43.66	17.03	17.00	0.00	48.95	45.95	27.12	27.12	24.77	6.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	45.78	2.83	2.83	0.00	4.09	4.16	37.10	37.10	37.34	45.19	45.19	45.19
Movement LOS	D	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	9.36			4.11			37.18			45.19		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	9.53											
Intersection LOS	A											
Intersection V/C	0.229											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 6: Healdsburg Ave/Parkland Farms Blvd

Control Type:	Signalized	Delay (sec / veh):	6.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.875

Intersection Setup

Name	Healdsburg Ave		Healdsburg Ave		Parkland Farms Blvd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	1	0
Pocket Length [ft]	100.00	100.00	150.00	100.00	50.00	100.00
Speed [mph]	35.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Healdsburg Ave		Healdsburg Ave		Parkland Farms Blvd	
Base Volume Input [veh/h]	185	77	4	248	150	19
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	6	0	0	0	12
Total Hourly Volume [veh/h]	185	71	4	248	150	7
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	58	22	1	78	47	2
Total Analysis Volume [veh/h]	231	89	5	310	188	9
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	49	0	11	60	20	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	20	20	20	20	20	20
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	4	0	8	3	3
g / C, Green / Cycle	0.21	0.21	0.01	0.42	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.10	0.10	0.00	0.10	0.06	0.06
s, saturation flow rate [veh/h]	1676	1527	1597	3192	1597	1579
c, Capacity [veh/h]	363	331	17	1360	280	277
d1, Uniform Delay [s]	6.81	6.89	9.87	3.66	7.28	7.28
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.84	1.10	9.79	0.08	0.75	0.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.44	0.48	0.30	0.23	0.35	0.35
d, Delay for Lane Group [s/veh]	7.66	7.98	19.66	3.75	8.03	8.04
Lane Group LOS	A	A	B	A	A	A
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	0.30	0.32	0.06	0.02	0.21	0.21
50th-Percentile Queue Length [ft]	7.53	7.99	1.40	0.40	5.29	5.28
95th-Percentile Queue Length [veh]	0.54	0.58	0.10	0.03	0.38	0.38
95th-Percentile Queue Length [ft]	13.56	14.38	2.51	0.72	9.53	9.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.76	7.98	19.66	3.75	8.04	8.04
Movement LOS	A	A	B	A	A	A
d_A, Approach Delay [s/veh]	7.82		4.00		8.04	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.43					
Intersection LOS	A					
Intersection V/C	0.875					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 1: US 101 S Ramps/Dry Creek Rd

Control Type:	Two-way stop	Delay (sec / veh):	1,054.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.037

Intersection Setup

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			55.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	0	0	0	80	1	33	0	227	173	568	208	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	0	0	0	80	1	33	0	227	173	568	208	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9300	0.9300	0.9300	1.0000	0.9300	0.9300	0.9300	0.9300	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]	0	0	0	22	0	9	0	61	47	153	56	0
Total Analysis Volume [veh/h]	0	0	0	86	1	35	0	244	186	611	224	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	3	0	0
Two-Stage Gap Acceptance		No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	2.67	0.04	0.04	0.00	0.00	0.00	0.54	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	1034.46	1054.23	9.61	0.00	0.00	0.00	11.88	0.00	0.00
Movement LOS				F	F	A		A	A	B	A	
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	10.09	10.09	0.13	0.00	0.00	0.00	7.13	7.13	0.00
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	252.31	252.31	3.36	0.00	0.00	0.00	178.17	178.17	0.00
d_A, Approach Delay [s/veh]	0.00			740.61			0.00			8.69		
Approach LOS	A			F			A			A		
d_I, Intersection Delay [s/veh]	70.38											
Intersection LOS	F											

Intersection Level Of Service Report

Intersection 2: US 101 N Ramps/Dry Creek Rd

Control Type:	Two-way stop	Delay (sec / veh):	43.0
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek 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	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek Road		
Base Volume Input [veh/h]	62	0	456	0	0	0	14	296	0	0	714	221
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	62	0	456	0	0	0	14	296	0	0	714	221
Peak Hour Factor	0.9600	0.9600	0.9600	1.0000	1.0000	1.0000	0.9600	0.9600	1.0000	1.0000	0.9600	0.9600
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]	16	0	119	0	0	0	4	77	0	0	186	58
Total Analysis Volume [veh/h]	65	0	475	0	0	0	15	308	0	0	744	230
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	2	0	0	0
Two-Stage Gap Acceptance	No			
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.41	0.00	0.65	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	42.27	43.01	18.54	0.00	0.00	0.00	10.19	0.00	0.00	0.00	0.00	0.00
Movement LOS	E	E	C				B	A			A	A
95th-Percentile Queue Length [veh]	1.79	1.79	4.82	0.00	0.00	0.00	2.40	2.40	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	44.78	44.78	120.54	0.00	0.00	0.00	59.93	59.93	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	21.40			0.00			0.47			0.00		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	6.37											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 3: Dry Creek Rd/Grove StControl Type: Signalized
Analysis Method: HCM 2010
Analysis Period: 15 minutesDelay (sec / veh): 39.0
Level Of Service: D
Volume to Capacity (v/c): 1.438**Intersection Setup**

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
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	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	75.00	100.00	265.00	75.00	100.00	75.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	172	54	108	16	71	158	113	500	119	72	572	22
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	59	0	0	57	0	0	28	0	0	10
Total Hourly Volume [veh/h]	172	54	49	16	71	101	113	500	91	72	572	12
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
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]	44	14	13	4	18	26	29	128	23	18	146	3
Total Analysis Volume [veh/h]	176	55	50	16	72	103	115	510	93	73	584	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	4			0			0			4		
Bicycle Volume [bicycles/h]	4			1			3			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	67
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	3	6	0	3	6	0
Maximum Green [s]	0	15	0	0	15	0	10	30	0	10	30	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0
Split [s]	0	29	0	0	29	0	13	34	0	13	34	0
Vehicle Extension [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	7	0	0	8	0	0	8	0	0	8	0
Pedestrian Clearance [s]	0	16	0	0	15	0	0	9	0	0	8	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.6	0.0	0.0	1.6	0.0	1.0	2.0	0.0	1.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	L	C	C	L	C	R
C, Cycle Length [s]	67	67	67	67	67	67	67	67	67
L, Total Lost Time per Cycle [s]	3.60	3.60	3.60	3.00	4.00	4.00	3.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.60	1.60	1.60	1.00	2.00	2.00	1.00	2.00	2.00
g_i, Effective Green Time [s]	25	25	25	6	27	27	4	25	25
g / C, Green / Cycle	0.38	0.38	0.38	0.09	0.41	0.41	0.06	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.76	0.04	0.22	0.07	0.18	0.19	0.05	0.35	0.01
s, saturation flow rate [veh/h]	304	1400	880	1597	1676	1572	1597	1676	1425
c, Capacity [veh/h]	209	528	390	142	685	643	89	630	536
d1, Uniform Delay [s]	25.81	13.48	15.71	29.97	14.35	14.40	31.29	20.03	13.16
k, delay calibration	0.50	0.04	0.08	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	92.83	0.03	0.67	4.15	2.14	2.34	6.74	21.77	0.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

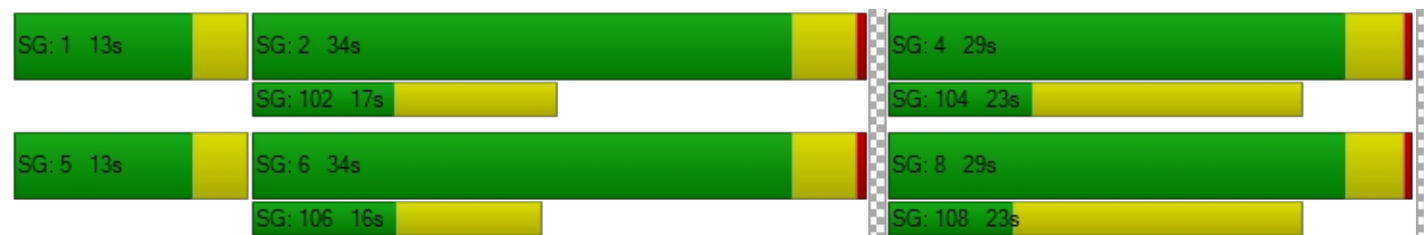
X, volume / capacity	1.10	0.09	0.49	0.81	0.45	0.46	0.82	0.93	0.02
d, Delay for Lane Group [s/veh]	118.64	13.51	16.38	34.12	16.49	16.73	38.03	41.80	13.24
Lane Group LOS	F	B	B	C	B	B	D	D	B
Critical Lane Group	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	8.69	0.45	1.92	1.91	3.49	3.36	1.29	11.65	0.12
50th-Percentile Queue Length [ft]	217.15	11.37	48.03	47.69	87.28	83.94	32.26	291.33	2.93
95th-Percentile Queue Length [veh]	14.32	0.82	3.46	3.43	6.28	6.04	2.32	17.25	0.21
95th-Percentile Queue Length [ft]	357.98	20.47	86.45	85.84	157.11	151.10	58.07	431.29	5.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	118.64	118.64	13.51	16.38	16.38	16.38	34.12	16.59	16.73	38.03	41.80	13.24
Movement LOS	F	F	B	B	B	B	C	B	B	D	D	B
d_A, Approach Delay [s/veh]	99.94			16.38			19.41			40.88		
Approach LOS	F			B			B			D		
d_I, Intersection Delay [s/veh]	39.00											
Intersection LOS	D											
Intersection V/C	1.438											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Dry Creek Rd-March Ave/Healdsburg Ave

Control Type:	Signalized	Delay (sec / veh):	34.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.631

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	165.00	100.00	100.00	90.00	100.00	100.00	115.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	193	274	59	76	311	163	167	186	175	57	249	39
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	12	0	0	53	0	0	82	0	0	15
Total Hourly Volume [veh/h]	193	274	47	76	311	110	167	186	93	57	249	24
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	51	72	12	20	82	29	44	49	24	15	66	6
Total Analysis Volume [veh/h]	203	288	49	80	327	116	176	196	98	60	262	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	4			2			7			2		
Bicycle Volume [bicycles/h]	1			2			1			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	96
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	6	0	3	6	0	3	6	0	3	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.6	0.0	3.0	3.6	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0
Split [s]	19	29	0	19	29	0	19	29	0	19	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	8	0	0	8	0	0	9	0	0	9	0
Pedestrian Clearance [s]	0	15	0	0	11	0	0	14	0	0	14	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	2.0	0.0	1.0	2.0	0.0	1.0	1.4	0.0	1.0	1.4	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	96	96	96	96	96	96	96	96	96	96	96
L, Total Lost Time per Cycle [s]	3.00	4.00	4.00	3.00	4.00	4.00	3.00	3.40	3.40	3.00	3.40
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	2.00	2.00	1.00	2.00	2.00	1.00	1.40	1.40	1.00	1.40
g_i, Effective Green Time [s]	14	36	36	6	28	28	12	36	36	5	28
g / C, Green / Cycle	0.15	0.37	0.37	0.06	0.29	0.29	0.13	0.38	0.38	0.05	0.30
(v / s)_i Volume / Saturation Flow Rate	0.13	0.10	0.10	0.05	0.14	0.14	0.11	0.12	0.07	0.04	0.17
s, saturation flow rate [veh/h]	1597	1676	1580	1597	1676	1511	1597	1676	1403	1597	1651
c, Capacity [veh/h]	234	623	587	102	484	437	207	632	529	77	487
d1, Uniform Delay [s]	40.11	21.14	21.19	44.35	28.16	28.30	40.91	21.13	20.06	45.27	28.91
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.37	1.10	1.19	12.34	3.30	3.88	9.26	1.27	0.77	15.72	5.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

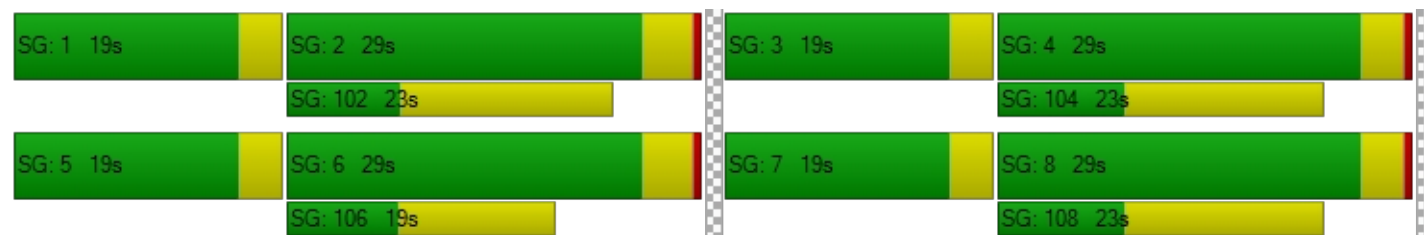
X, volume / capacity	0.87	0.28	0.28	0.78	0.47	0.49	0.85	0.31	0.19	0.78	0.59
d, Delay for Lane Group [s/veh]	49.48	22.24	22.38	56.69	31.46	32.18	50.17	22.40	20.83	60.99	34.06
Lane Group LOS	D	C	C	E	C	C	D	C	C	E	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh]	5.24	2.85	2.75	2.19	4.66	4.41	4.56	3.27	1.56	1.74	6.23
50th-Percentile Queue Length [ft]	130.96	71.19	68.76	54.82	116.51	110.27	113.97	81.76	38.99	43.50	155.64
95th-Percentile Queue Length [veh]	8.99	5.13	4.95	3.95	8.20	7.86	8.06	5.89	2.81	3.13	10.32
95th-Percentile Queue Length [ft]	224.80	128.14	123.77	98.67	205.03	196.38	201.51	147.17	70.19	78.30	257.94

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.48	22.30	22.38	56.69	31.68	32.18	50.17	22.40	20.83	60.99	34.06	34.06
Movement LOS	D	C	C	E	C	C	D	C	C	E	C	C
d_A, Approach Delay [s/veh]	32.52			35.61			32.47			38.72		
Approach LOS	C			D			C			D		
d_I, Intersection Delay [s/veh]	34.51											
Intersection LOS	C											
Intersection V/C	0.631											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 5: Healdsburg Ave/Grove St

Control Type: Signalized
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 11.7
 Level Of Service: B
 Volume to Capacity (v/c): 0.221

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Grove St			Private Dwy		
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	1	0	0	1	0	0	1	0	1	0	0	0
Pocket Length [ft]	150.00	100.00	100.00	80.00	100.00	100.00	135.00	100.00	70.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Grove St			Private Dwy		
Base Volume Input [veh/h]	47	269	3	0	309	104	113	1	63	3	0	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	18	0	0	36	0	0	0
Total Hourly Volume [veh/h]	47	269	3	0	309	86	113	1	27	3	0	0
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]	13	73	1	0	84	23	31	0	7	1	0	0
Total Analysis Volume [veh/h]	51	292	3	0	336	93	123	1	29	3	0	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	1			0			0			3		
Bicycle Volume [bicycles/h]	2			3			1			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	3	6	0	3	6	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	15	30	0	0	20	0	0	15	0
Amber [s]	3.0	3.7	0.0	3.0	3.7	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	1.0	0.0
Split [s]	21	35	0	6	20	0	0	19	0	0	20	0
Vehicle Extension [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	2.1	0.0	1.0	2.1	0.0	0.0	1.6	0.0	0.0	2.2	0.0
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	3.00	4.10	4.10	3.00	4.10	4.10	3.60	3.60	3.60	4.20
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	2.10	2.10	1.00	2.10	2.10	1.60	1.60	1.60	2.20
g_i, Effective Green Time [s]	3	60	60	0	57	57	5	5	5	0
g / C, Green / Cycle	0.04	0.75	0.75	0.00	0.71	0.71	0.06	0.06	0.06	0.00
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.08	0.00	0.12	0.12	0.03	0.03	0.02	0.00
s, saturation flow rate [veh/h]	1774	1863	1855	1774	1863	1709	1774	1775	1551	1774
c, Capacity [veh/h]	67	1392	1386	1	1323	1214	108	109	95	8
d1, Uniform Delay [s]	38.19	2.78	2.78	0.00	3.81	3.83	36.59	36.59	35.98	39.74
k, delay calibration	0.04	0.50	0.50	0.04	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.44	0.15	0.15	0.00	0.27	0.31	1.76	1.75	0.67	9.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

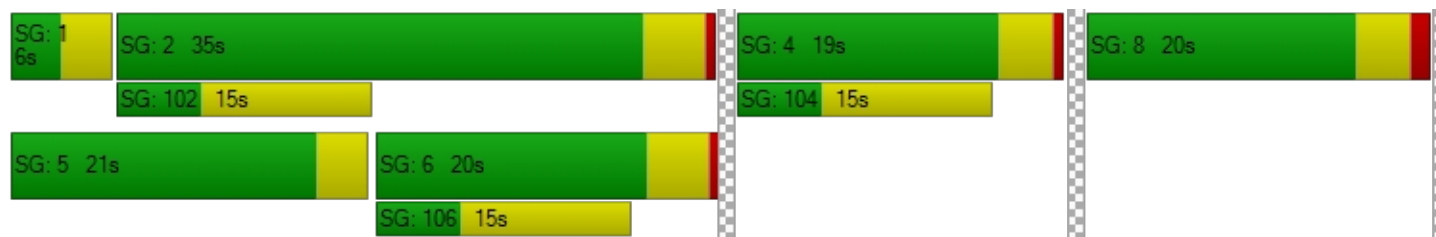
X, volume / capacity	0.76	0.11	0.11	0.00	0.17	0.17	0.57	0.57	0.31	0.35
d, Delay for Lane Group [s/veh]	44.63	2.93	2.93	0.00	4.08	4.14	38.34	38.34	36.65	48.76
Lane Group LOS	D	A	A	A	A	A	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	1.08	0.46	0.46	0.00	0.92	0.89	1.19	1.20	0.54	0.08
50th-Percentile Queue Length [ft]	27.03	11.45	11.43	0.00	23.10	22.24	29.87	29.88	13.57	1.99
95th-Percentile Queue Length [veh]	1.95	0.82	0.82	0.00	1.66	1.60	2.15	2.15	0.98	0.14
95th-Percentile Queue Length [ft]	48.65	20.61	20.58	0.00	41.59	40.03	53.76	53.78	24.43	3.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	44.63	2.93	2.93	0.00	4.10	4.14	38.34	38.34	36.65	48.76	48.76	48.76
Movement LOS	D	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	9.08			4.11			38.02			48.76		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	11.67											
Intersection LOS	B											
Intersection V/C	0.221											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 6: Healdsburg Ave/Parkland Farms Blvd

Control Type:	Signalized	Delay (sec / veh):	6.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.975

Intersection Setup

Name	Healdsburg Ave		Healdsburg Ave		Parkland Farms Blvd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	1	0
Pocket Length [ft]	100.00	100.00	150.00	100.00	50.00	100.00
Speed [mph]	35.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Healdsburg Ave		Healdsburg Ave		Parkland Farms Blvd	
Base Volume Input [veh/h]	227	149	34	317	88	7
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	6	0	0	0	12
Total Hourly Volume [veh/h]	227	143	34	317	88	0
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	61	38	9	85	24	0
Total Analysis Volume [veh/h]	244	154	37	341	95	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	1		3		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	49	0	11	60	20	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	20	20	20	20	20	20
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	5	1	10	2	2
g / C, Green / Cycle	0.24	0.24	0.05	0.49	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.12	0.14	0.02	0.11	0.03	0.03
s, saturation flow rate [veh/h]	1676	1450	1597	3192	1597	1597
c, Capacity [veh/h]	410	355	78	1576	170	170
d1, Uniform Delay [s]	6.48	6.62	9.26	2.87	8.23	8.23
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.89	1.39	4.34	0.07	0.88	0.88
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.49	0.56	0.47	0.22	0.28	0.28
d, Delay for Lane Group [s/veh]	7.37	8.01	13.61	2.94	9.11	9.11
Lane Group LOS	A	A	B	A	A	A
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	0.34	0.38	0.17	0.01	0.13	0.13
50th-Percentile Queue Length [ft]	8.57	9.60	4.18	0.37	3.28	3.28
95th-Percentile Queue Length [veh]	0.62	0.69	0.30	0.03	0.24	0.24
95th-Percentile Queue Length [ft]	15.43	17.28	7.53	0.67	5.91	5.91

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.49	8.01	13.61	2.94	9.11	9.11
Movement LOS	A	A	B	A	A	A
d_A, Approach Delay [s/veh]	7.69		3.99		9.11	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.24					
Intersection LOS	A					
Intersection V/C	0.975					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 1: US 101 S Ramps/Dry Creek Rd

Control Type:	All-way stop	Delay (sec / veh):	19.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.848

Intersection Setup

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	250.00	100.00	100.00
Speed [mph]	30.00			55.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	0	0	0	94	0	19	0	167	76	494	244	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	14	0	37	14	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]	0	0	0	94	0	19	0	181	76	531	258	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9100	0.9100	0.9100	1.0000	0.9100	0.9100	0.9100	0.9100	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]	0	0	0	26	0	5	0	50	21	146	71	0
Total Analysis Volume [veh/h]	0	0	0	103	0	21	0	199	84	584	284	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]		486	581	788	689	762
Degree of Utilization, x		0.21	0.04	0.36	0.85	0.37

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]		0.79	0.11	1.64	9.63	1.73
95th-Percentile Queue Length [ft]		19.85	2.81	41.00	240.65	43.30
Approach Delay [s/veh]	0.00	11.59		10.11	23.47	
Approach LOS	A	B		B	C	
Intersection Delay [s/veh]	19.35					
Intersection LOS	C					

Intersection Level Of Service Report

Intersection 2: US 101 N Ramps/Dry Creek Rd

Control Type: Two-way stop
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 66.5
 Level Of Service: F
 Volume to Capacity (v/c): 0.742

Intersection Setup

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek 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	1	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek Road		
Base Volume Input [veh/h]	125	2	572	0	0	0	8	254	0	0	605	103
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	27	0	0	0	0	14	0	0	51	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]	125	2	599	0	0	0	8	268	0	0	656	103
Peak Hour Factor	0.9000	0.9000	0.9000	1.0000	1.0000	1.0000	0.9000	0.9000	1.0000	1.0000	0.9000	0.9000
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]	35	1	166	0	0	0	2	74	0	0	182	29
Total Analysis Volume [veh/h]	139	2	666	0	0	0	9	298	0	0	729	114
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	2	0	0	0
Two-Stage Gap Acceptance	No			
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.74	0.01	0.90	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	66.47	65.86	36.82	0.00	0.00	0.00	9.59	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	F	E				A	A			A	A
95th-Percentile Queue Length [veh]	4.93	4.93	11.78	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	123.14	123.14	294.39	0.00	0.00	0.00	0.86	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	42.00			0.00			0.28			0.00		
Approach LOS	E			A			A			A		
d_I, Intersection Delay [s/veh]	17.36											
Intersection LOS	F											

Intersection Level Of Service Report

Intersection 3: Dry Creek Rd/Grove St

Control Type: Signalized
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 31.4
 Level Of Service: C
 Volume to Capacity (v/c): 1.041

Intersection Setup

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
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	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	75.00	100.00	265.00	75.00	100.00	75.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	86	36	41	20	71	145	106	555	125	64	448	31
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	22	12	16	17	21	19	16	6	6	16	17
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
Right-Turn on Red Volume [veh/h]	0	0	14	0	0	67	0	0	27	0	0	3
Total Hourly Volume [veh/h]	100	58	39	36	88	99	125	571	104	70	464	45
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
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]	29	17	11	10	25	28	36	164	30	20	133	13
Total Analysis Volume [veh/h]	115	67	45	41	101	114	144	656	120	80	533	52
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	2			0			0			3		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	67
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	3	6	0	3	6	0
Maximum Green [s]	0	15	0	0	15	0	10	30	0	10	30	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0
Split [s]	0	29	0	0	29	0	13	34	0	13	34	0
Vehicle Extension [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	7	0	0	8	0	0	8	0	0	8	0
Pedestrian Clearance [s]	0	16	0	0	15	0	0	9	0	0	8	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.6	0.0	0.0	1.6	0.0	1.0	2.0	0.0	1.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	L	C	C	L	C	R
C, Cycle Length [s]	67	67	67	67	67	67	67	67	67
L, Total Lost Time per Cycle [s]	3.60	3.60	3.60	3.00	4.00	4.00	3.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.60	1.60	1.60	1.00	2.00	2.00	1.00	2.00	2.00
g_i, Effective Green Time [s]	25	25	25	7	27	27	4	24	24
g / C, Green / Cycle	0.38	0.38	0.38	0.11	0.40	0.40	0.06	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.37	0.03	0.45	0.09	0.24	0.24	0.05	0.32	0.04
s, saturation flow rate [veh/h]	494	1422	574	1597	1676	1586	1597	1676	1395
c, Capacity [veh/h]	274	537	279	176	675	639	98	594	494
d1, Uniform Delay [s]	19.12	13.41	17.44	29.16	15.67	15.68	31.06	20.48	14.51
k, delay calibration	0.42	0.04	0.50	0.09	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.18	0.02	36.37	7.28	3.76	3.98	6.01	18.84	0.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

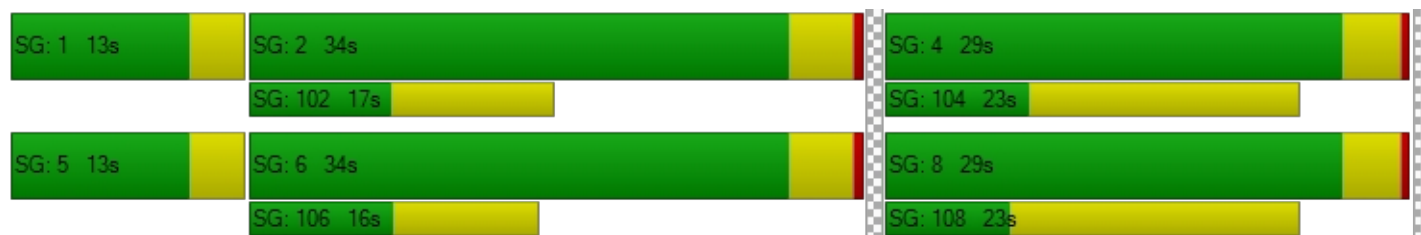
X, volume / capacity	0.66	0.08	0.92	0.82	0.59	0.59	0.81	0.90	0.11
d, Delay for Lane Group [s/veh]	29.30	13.43	53.82	36.44	19.44	19.66	37.07	39.32	14.94
Lane Group LOS	C	B	D	D	B	B	D	D	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	3.20	0.41	5.41	2.52	5.02	4.79	1.39	10.26	0.55
50th-Percentile Queue Length [ft]	79.95	10.18	135.26	63.01	125.42	119.77	34.80	256.45	13.82
95th-Percentile Queue Length [veh]	5.76	0.73	9.23	4.54	8.69	8.38	2.51	15.51	1.00
95th-Percentile Queue Length [ft]	143.91	18.33	230.63	113.42	217.26	209.51	62.64	387.77	24.88

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.30	29.30	13.43	53.82	53.82	53.82	36.44	19.52	19.66	37.07	39.32	14.94
Movement LOS	C	C	B	D	D	D	D	B	B	D	D	B
d_A, Approach Delay [s/veh]	26.16			53.82			22.19			37.15		
Approach LOS	C			D			C			D		
d_I, Intersection Delay [s/veh]	31.35											
Intersection LOS	C											
Intersection V/C	1.041											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 4: Dry Creek Rd-March Ave/Healdsburg Ave

Control Type:	Signalized	Delay (sec / veh):	39.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.654

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	165.00	100.00	100.00	90.00	100.00	100.00	115.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	201	197	36	56	253	117	131	236	189	64	189	36
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	19	3	0	0	1	0	0	13	15	0	10	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
Right-Turn on Red Volume [veh/h]	0	0	16	0	0	46	0	0	91	0	0	12
Total Hourly Volume [veh/h]	220	200	20	56	254	71	131	249	113	64	199	24
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
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]	69	63	6	18	79	22	41	78	35	20	62	8
Total Analysis Volume [veh/h]	275	250	25	70	318	89	164	311	141	80	249	30
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	6			6			5			1		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	96
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	6	0	3	6	0	3	6	0	3	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.6	0.0	3.0	3.6	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0
Split [s]	19	29	0	19	29	0	19	29	0	19	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	8	0	0	8	0	0	9	0	0	9	0
Pedestrian Clearance [s]	0	15	0	0	11	0	0	14	0	0	14	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	2.0	0.0	1.0	2.0	0.0	1.0	1.4	0.0	1.0	1.4	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	96	96	96	96	96	96	96	96	96	96	96
L, Total Lost Time per Cycle [s]	3.00	4.00	4.00	3.00	4.00	4.00	3.00	3.40	3.40	3.00	3.40
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	2.00	2.00	1.00	2.00	2.00	1.00	1.40	1.40	1.00	1.40
g_i, Effective Green Time [s]	16	38	38	5	27	27	12	33	33	6	28
g / C, Green / Cycle	0.17	0.39	0.39	0.06	0.28	0.28	0.12	0.35	0.35	0.06	0.29
(v / s)_i Volume / Saturation Flow Rate	0.17	0.08	0.08	0.04	0.12	0.13	0.10	0.19	0.10	0.05	0.17
s, saturation flow rate [veh/h]	1597	1676	1623	1597	1676	1549	1597	1676	1418	1597	1641
c, Capacity [veh/h]	267	660	639	89	474	438	195	582	492	102	474
d1, Uniform Delay [s]	40.05	19.28	19.29	44.80	28.27	28.36	41.28	25.15	22.75	44.35	29.30
k, delay calibration	0.13	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	37.00	0.73	0.76	13.70	2.97	3.34	9.28	3.49	1.46	12.33	5.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

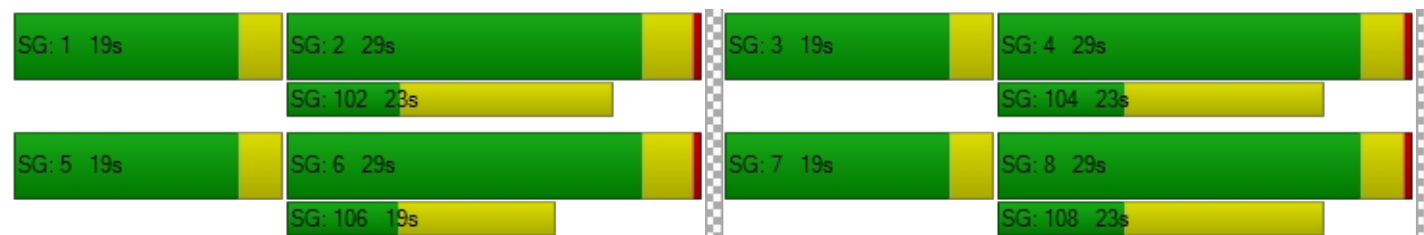
X, volume / capacity	1.03	0.21	0.21	0.78	0.44	0.45	0.84	0.53	0.29	0.78	0.59
d, Delay for Lane Group [s/veh]	77.05	20.01	20.05	58.50	31.24	31.70	50.55	28.64	24.21	56.68	34.58
Lane Group LOS	F	C	C	E	C	C	D	C	C	E	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh]	8.93	2.15	2.10	1.96	4.22	4.04	4.26	6.11	2.47	2.21	6.10
50th-Percentile Queue Length [ft]	223.34	53.78	52.54	48.96	105.61	100.96	106.49	152.78	61.86	55.29	152.58
95th-Percentile Queue Length [veh]	14.04	3.87	3.78	3.52	7.60	7.27	7.64	10.17	4.45	3.98	10.15
95th-Percentile Queue Length [ft]	350.98	96.81	94.57	88.12	189.88	181.72	191.11	254.14	111.35	99.52	253.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	77.05	20.03	20.05	58.50	31.40	31.70	50.55	28.64	24.21	56.68	34.58	34.58
Movement LOS	F	C	C	E	C	C	D	C	C	E	C	C
d_A, Approach Delay [s/veh]	48.54			35.43			33.46			39.50		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	39.16											
Intersection LOS	D											
Intersection V/C	0.654											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 5: Healdsburg Ave/Grove St

Control Type: Signalized
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 9.8
 Level Of Service: A
 Volume to Capacity (v/c): 0.232

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Grove St			Private Dwy		
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	1	0	0	1	0	0	1	0	1	0	0	0
Pocket Length [ft]	150.00	100.00	100.00	80.00	100.00	100.00	135.00	100.00	70.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Grove St			Private Dwy		
Base Volume Input [veh/h]	36	198	2	0	277	139	51	0	52	2	2	1
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	0	0	0	0	0	2	0	1	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	13	0	0	29	0	0	1
Total Hourly Volume [veh/h]	39	198	2	0	277	126	53	0	24	2	2	0
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
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]	12	62	1	0	87	39	17	0	8	1	1	0
Total Analysis Volume [veh/h]	49	248	3	0	346	158	66	0	30	3	3	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			0			0			3		
Bicycle Volume [bicycles/h]	0			1			1			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	3	6	0	3	6	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	15	30	0	0	20	0	0	15	0
Amber [s]	3.0	3.7	0.0	3.0	3.7	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	1.0	0.0
Split [s]	21	35	0	6	20	0	0	19	0	0	20	0
Vehicle Extension [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	2.1	0.0	1.0	2.1	0.0	0.0	1.6	0.0	0.0	2.2	0.0
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	3.00	4.10	4.10	3.00	4.10	4.10	3.60	3.60	3.60	4.20
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	2.10	2.10	1.00	2.10	2.10	1.60	1.60	1.60	2.20
g_i, Effective Green Time [s]	3	60	60	0	57	57	4	4	4	1
g / C, Green / Cycle	0.04	0.75	0.75	0.00	0.71	0.71	0.06	0.06	0.06	0.01
(v / s)_i Volume / Saturation Flow Rate	0.03	0.07	0.07	0.00	0.14	0.15	0.02	0.02	0.02	0.00
s, saturation flow rate [veh/h]	1774	1863	1855	1774	1863	1646	1774	1774	1517	1817
c, Capacity [veh/h]	64	1395	1389	1	1329	1174	99	99	85	16
d1, Uniform Delay [s]	38.26	2.71	2.71	0.00	3.83	3.86	36.38	36.38	36.42	39.51
k, delay calibration	0.04	0.50	0.50	0.04	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.72	0.13	0.13	0.00	0.33	0.40	0.72	0.72	0.93	5.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

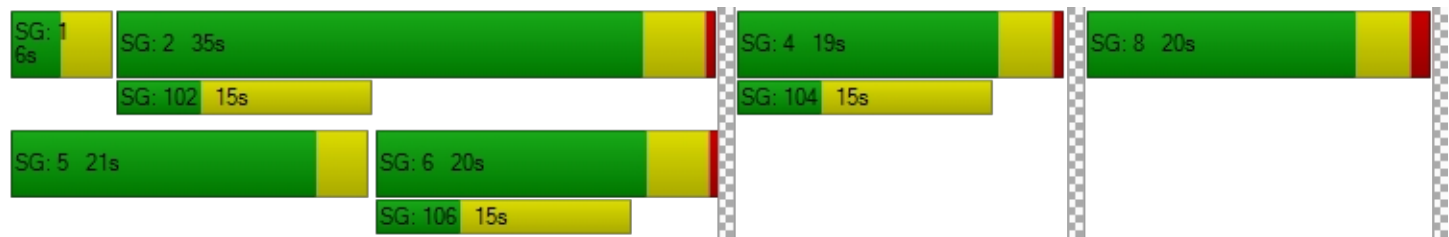
X, volume / capacity	0.76	0.09	0.09	0.00	0.20	0.21	0.33	0.33	0.35	0.39
d, Delay for Lane Group [s/veh]	44.98	2.84	2.84	0.00	4.17	4.26	37.10	37.10	37.35	45.19
Lane Group LOS	D	A	A	A	A	A	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes
50th-Percentile Queue Length [veh]	1.04	0.38	0.38	0.00	1.11	1.04	0.62	0.62	0.57	0.14
50th-Percentile Queue Length [ft]	26.10	9.50	9.49	0.00	27.82	26.10	15.54	15.54	14.24	3.53
95th-Percentile Queue Length [veh]	1.88	0.68	0.68	0.00	2.00	1.88	1.12	1.12	1.02	0.25
95th-Percentile Queue Length [ft]	46.99	17.10	17.07	0.00	50.07	46.99	27.97	27.97	25.62	6.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	44.98	2.84	2.84	0.00	4.19	4.26	37.10	37.10	37.35	45.19	45.19	45.19
Movement LOS	D	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	9.72			4.21			37.18			45.19		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	9.80											
Intersection LOS	A											
Intersection V/C	0.232											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Healdsburg Ave/Parkland Farms Blvd

Control Type:	Signalized	Delay (sec / veh):	6.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.876

Intersection Setup

Name	Healdsburg Ave		Healdsburg Ave		Parkland Farms Blvd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	1	0
Pocket Length [ft]	100.00	100.00	150.00	100.00	50.00	100.00
Speed [mph]	35.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Healdsburg Ave		Healdsburg Ave		Parkland Farms Blvd	
Base Volume Input [veh/h]	185	77	4	248	150	19
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	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
Right-Turn on Red Volume [veh/h]	0	6	0	0	0	12
Total Hourly Volume [veh/h]	187	71	4	248	150	7
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	58	22	1	78	47	2
Total Analysis Volume [veh/h]	234	89	5	310	188	9
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	49	0	11	60	20	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	20	20	20	20	20	20
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	4	0	8	3	3
g / C, Green / Cycle	0.21	0.21	0.01	0.42	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.10	0.11	0.00	0.10	0.06	0.06
s, saturation flow rate [veh/h]	1676	1528	1597	3192	1597	1579
c, Capacity [veh/h]	364	332	17	1361	280	277
d1, Uniform Delay [s]	6.82	6.89	9.88	3.66	7.28	7.29
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.85	1.11	9.79	0.08	0.75	0.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.44	0.49	0.30	0.23	0.35	0.35
d, Delay for Lane Group [s/veh]	7.67	7.99	19.67	3.75	8.04	8.05
Lane Group LOS	A	A	B	A	A	A
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	0.30	0.32	0.06	0.02	0.21	0.21
50th-Percentile Queue Length [ft]	7.62	8.08	1.40	0.40	5.31	5.29
95th-Percentile Queue Length [veh]	0.55	0.58	0.10	0.03	0.38	0.38
95th-Percentile Queue Length [ft]	13.71	14.54	2.51	0.72	9.55	9.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.77	7.99	19.67	3.75	8.04	8.05
Movement LOS	A	A	B	A	A	A
d_A, Approach Delay [s/veh]	7.83		4.00		8.04	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.44					
Intersection LOS	A					
Intersection V/C	0.876					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 1: US 101 S Ramps/Dry Creek Rd

Control Type:	All-way stop	Delay (sec / veh):	27.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.959

Intersection Setup

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	250.00	100.00	100.00
Speed [mph]	30.00			55.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	0	0	0	80	1	33	0	227	173	568	208	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	18	0	34	14	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]	0	0	0	80	1	33	0	245	173	602	222	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9300	0.9300	0.9300	1.0000	0.9300	0.9300	0.9300	0.9300	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]	0	0	0	22	0	9	0	66	47	162	60	0
Total Analysis Volume [veh/h]	0	0	0	86	1	35	0	263	186	647	239	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]		464	549	791	675	745
Degree of Utilization, x		0.19	0.06	0.57	0.96	0.32

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]		0.68	0.20	3.63	13.94	1.39
95th-Percentile Queue Length [ft]		17.08	5.09	90.86	348.51	34.68
Approach Delay [s/veh]	0.00	11.52		13.37	37.45	
Approach LOS	A	B		B	E	
Intersection Delay [s/veh]	27.86					
Intersection LOS	D					

Intersection Level Of Service Report

Intersection 2: US 101 N Ramps/Dry Creek Rd

Control Type:	Two-way stop	Delay (sec / veh):	49.9
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek 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	1	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek Road		
Base Volume Input [veh/h]	62	0	456	0	0	0	14	296	0	0	714	221
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	53	0	0	0	0	18	0	0	48	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]	62	0	509	0	0	0	14	314	0	0	762	221
Peak Hour Factor	0.9600	0.9600	0.9600	1.0000	1.0000	1.0000	0.9600	0.9600	1.0000	1.0000	0.9600	0.9600
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]	16	0	133	0	0	0	4	82	0	0	198	58
Total Analysis Volume [veh/h]	65	0	530	0	0	0	15	327	0	0	794	230
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	2	0	0	0
Two-Stage Gap Acceptance	No			
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.45	0.00	0.74	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	49.41	49.86	23.07	0.00	0.00	0.00	10.43	0.00	0.00	0.00	0.00	0.00
Movement LOS	E	E	C				B	A			A	A
95th-Percentile Queue Length [veh]	2.06	2.06	6.69	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	51.41	51.41	167.18	0.00	0.00	0.00	1.70	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	25.95			0.00			0.46			0.00		
Approach LOS	D			A			A			A		
d_I, Intersection Delay [s/veh]	7.95											
Intersection LOS	E											

Intersection Level Of Service Report

Intersection 3: Dry Creek Rd/Grove St

Control Type: Signalized
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 47.2
 Level Of Service: D
 Volume to Capacity (v/c): 1.321

Intersection Setup

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
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	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	75.00	100.00	265.00	75.00	100.00	75.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	172	54	108	16	71	158	113	500	119	72	572	22
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	28	10	21	31	21	31	21	19	14	15	14
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
Right-Turn on Red Volume [veh/h]	0	0	59	0	0	57	0	0	28	0	0	10
Total Hourly Volume [veh/h]	184	82	59	37	102	122	144	521	110	86	587	26
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
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]	47	21	15	9	26	31	37	133	28	22	150	7
Total Analysis Volume [veh/h]	188	84	60	38	104	124	147	532	112	88	599	27
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	4			0			0			4		
Bicycle Volume [bicycles/h]	4			1			3			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	67
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	3	6	0	3	6	0
Maximum Green [s]	0	15	0	0	15	0	10	30	0	10	30	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0
Split [s]	0	29	0	0	29	0	13	34	0	13	34	0
Vehicle Extension [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	7	0	0	8	0	0	8	0	0	8	0
Pedestrian Clearance [s]	0	16	0	0	15	0	0	9	0	0	8	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.6	0.0	0.0	1.6	0.0	1.0	2.0	0.0	1.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	L	C	C	L	C	R
C, Cycle Length [s]	67	67	67	67	67	67	67	67	67
L, Total Lost Time per Cycle [s]	3.60	3.60	3.60	3.00	4.00	4.00	3.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.60	1.60	1.60	1.00	2.00	2.00	1.00	2.00	2.00
g_i, Effective Green Time [s]	25	25	25	8	27	27	5	24	24
g / C, Green / Cycle	0.38	0.38	0.38	0.11	0.40	0.40	0.07	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.64	0.04	0.42	0.09	0.20	0.20	0.06	0.36	0.02
s, saturation flow rate [veh/h]	428	1400	629	1597	1676	1559	1597	1676	1425
c, Capacity [veh/h]	252	527	298	179	666	620	109	592	503
d1, Uniform Delay [s]	24.63	13.62	17.42	29.08	15.16	15.21	30.79	21.66	14.28
k, delay calibration	0.50	0.04	0.50	0.10	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	79.46	0.04	30.63	8.01	2.64	2.91	5.33	39.80	0.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

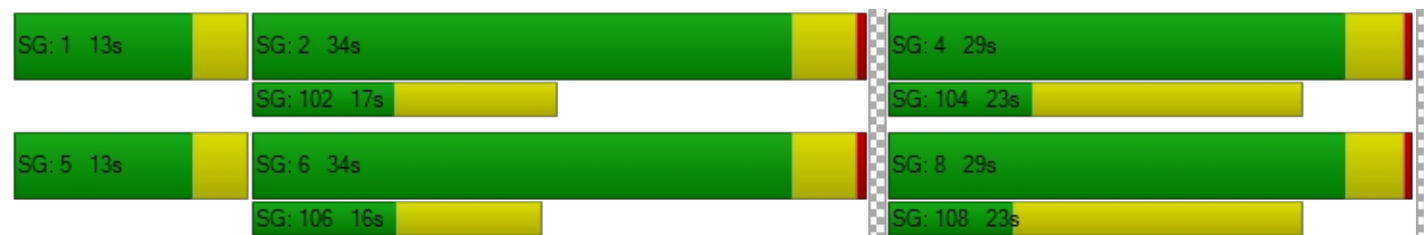
X, volume / capacity	1.08	0.11	0.89	0.82	0.50	0.50	0.81	1.01	0.05
d, Delay for Lane Group [s/veh]	104.10	13.65	48.05	37.09	17.80	18.12	36.13	61.46	14.48
Lane Group LOS	F	B	D	D	B	B	D	F	B
Critical Lane Group	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	9.52	0.55	5.26	2.61	3.94	3.77	1.51	14.95	0.28
50th-Percentile Queue Length [ft]	238.10	13.76	131.53	65.17	98.54	94.16	37.69	373.87	7.02
95th-Percentile Queue Length [veh]	15.27	0.99	9.02	4.69	7.09	6.78	2.71	21.46	0.51
95th-Percentile Queue Length [ft]	381.79	24.77	225.57	117.31	177.37	169.48	67.85	536.40	12.64

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	104.10	104.10	13.65	48.05	48.05	48.05	37.09	17.92	18.12	36.13	61.46	14.48
Movement LOS	F	F	B	D	D	D	D	B	B	D	F	B
d_A, Approach Delay [s/veh]	87.75			48.05			21.51			56.56		
Approach LOS	F			D			C			E		
d_I, Intersection Delay [s/veh]	47.23											
Intersection LOS	D											
Intersection V/C	1.321											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 4: Dry Creek Rd-March Ave/Healdsburg Ave

Control Type:	Signalized	Delay (sec / veh):	35.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.665

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	165.00	100.00	100.00	90.00	100.00	100.00	115.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	193	274	59	76	311	163	167	186	175	57	249	39
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	10	0	3	10	0	4	11	19	0	14	4
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
Right-Turn on Red Volume [veh/h]	0	0	12	0	0	53	0	0	82	0	0	15
Total Hourly Volume [veh/h]	211	284	47	79	321	110	171	197	112	57	263	28
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	56	75	12	21	84	29	45	52	29	15	69	7
Total Analysis Volume [veh/h]	222	299	49	83	338	116	180	207	118	60	277	29
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	4			2			7			2		
Bicycle Volume [bicycles/h]	1			2			1			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	96
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	6	0	3	6	0	3	6	0	3	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.6	0.0	3.0	3.6	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0
Split [s]	19	29	0	19	29	0	19	29	0	19	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	8	0	0	8	0	0	9	0	0	9	0
Pedestrian Clearance [s]	0	15	0	0	11	0	0	14	0	0	14	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	2.0	0.0	1.0	2.0	0.0	1.0	1.4	0.0	1.0	1.4	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	96	96	96	96	96	96	96	96	96	96	96
L, Total Lost Time per Cycle [s]	3.00	4.00	4.00	3.00	4.00	4.00	3.00	3.40	3.40	3.00	3.40
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	2.00	2.00	1.00	2.00	2.00	1.00	1.40	1.40	1.00	1.40
g_i, Effective Green Time [s]	15	36	36	6	27	27	13	36	36	5	28
g / C, Green / Cycle	0.16	0.37	0.37	0.07	0.28	0.28	0.13	0.37	0.37	0.05	0.29
(v / s)_i Volume / Saturation Flow Rate	0.14	0.11	0.11	0.05	0.14	0.14	0.11	0.12	0.08	0.04	0.19
s, saturation flow rate [veh/h]	1597	1676	1583	1597	1676	1515	1597	1676	1403	1597	1649
c, Capacity [veh/h]	252	627	592	106	473	427	211	625	523	77	475
d1, Uniform Delay [s]	39.58	21.08	21.12	44.22	28.83	28.97	40.78	21.59	20.66	45.27	29.91
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.57	1.13	1.22	12.02	3.71	4.34	9.27	1.42	1.00	15.72	6.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

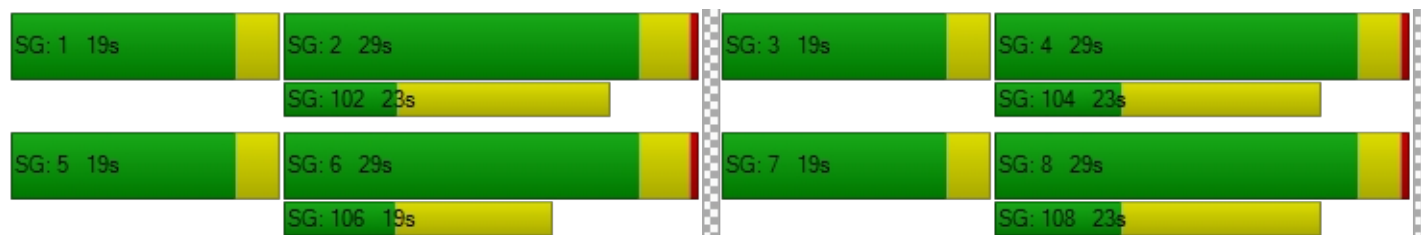
X, volume / capacity	0.88	0.28	0.29	0.79	0.50	0.51	0.85	0.33	0.23	0.78	0.64
d, Delay for Lane Group [s/veh]	49.15	22.21	22.34	56.24	32.54	33.31	50.05	23.01	21.67	60.99	36.49
Lane Group LOS	D	C	C	E	C	C	D	C	C	E	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh]	5.72	2.94	2.84	2.26	4.87	4.62	4.66	3.52	1.93	1.74	6.92
50th-Percentile Queue Length [ft]	143.11	73.50	70.97	56.59	121.87	115.44	116.47	87.91	48.23	43.50	172.97
95th-Percentile Queue Length [veh]	9.65	5.29	5.11	4.07	8.50	8.14	8.20	6.33	3.47	3.13	11.23
95th-Percentile Queue Length [ft]	241.20	132.31	127.75	101.85	212.40	203.55	204.97	158.24	86.82	78.30	280.81

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.15	22.26	22.34	56.24	32.77	33.31	50.05	23.01	21.67	60.99	36.49	36.49
Movement LOS	D	C	C	E	C	C	D	C	C	E	D	D
d_A, Approach Delay [s/veh]	32.74			36.52			32.33			40.51		
Approach LOS	C			D			C			D		
d_I, Intersection Delay [s/veh]	35.10											
Intersection LOS	D											
Intersection V/C	0.665											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 5: Healdsburg Ave/Grove St

Control Type: Signalized
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 12.7
 Level Of Service: B
 Volume to Capacity (v/c): 0.247

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Grove St			Private Dwy		
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	1	0	0	1	0	0	1	0	1	0	0	0
Pocket Length [ft]	150.00	100.00	100.00	80.00	100.00	100.00	135.00	100.00	70.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Grove St			Private Dwy		
Base Volume Input [veh/h]	47	269	3	0	309	104	113	1	63	3	0	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	6	0	0	3	25	16	0	10	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	18	0	0	36	0	0	0
Total Hourly Volume [veh/h]	59	275	3	0	312	111	129	1	37	3	0	0
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]	16	75	1	0	85	30	35	0	10	1	0	0
Total Analysis Volume [veh/h]	64	299	3	0	339	121	140	1	40	3	0	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	1			0			0			3		
Bicycle Volume [bicycles/h]	2			3			1			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	3	6	0	3	6	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	15	30	0	0	20	0	0	15	0
Amber [s]	3.0	3.7	0.0	3.0	3.7	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	1.0	0.0
Split [s]	21	35	0	6	20	0	0	19	0	0	20	0
Vehicle Extension [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	2.1	0.0	1.0	2.1	0.0	0.0	1.6	0.0	0.0	2.2	0.0
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	3.00	4.10	4.10	3.00	4.10	4.10	3.60	3.60	3.60	4.20
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	2.10	2.10	1.00	2.10	2.10	1.60	1.60	1.60	2.20
g_i, Effective Green Time [s]	4	60	60	0	56	56	5	5	5	0
g / C, Green / Cycle	0.05	0.75	0.75	0.00	0.70	0.70	0.06	0.06	0.06	0.00
(v / s)_i Volume / Saturation Flow Rate	0.04	0.08	0.08	0.00	0.13	0.13	0.04	0.04	0.03	0.00
s, saturation flow rate [veh/h]	1774	1863	1855	1774	1863	1678	1774	1775	1552	1774
c, Capacity [veh/h]	84	1387	1381	1	1300	1171	113	113	99	8
d1, Uniform Delay [s]	37.70	2.84	2.84	0.00	4.19	4.22	36.56	36.56	36.03	39.74
k, delay calibration	0.04	0.50	0.50	0.04	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.13	0.16	0.16	0.00	0.31	0.36	2.07	2.07	0.98	9.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

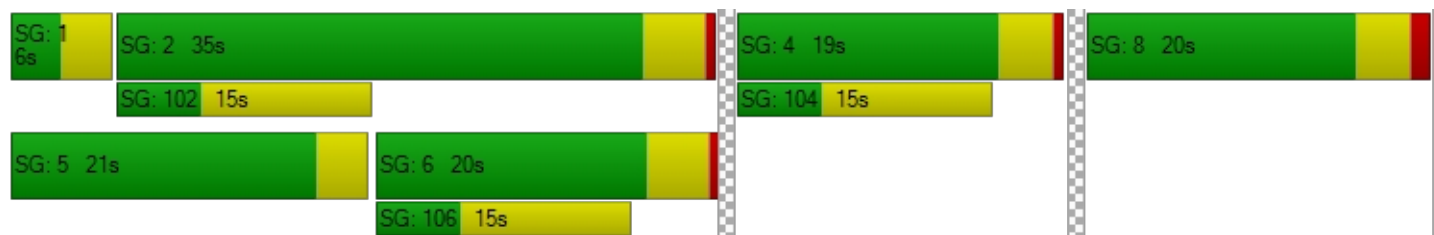
X, volume / capacity	0.76	0.11	0.11	0.00	0.18	0.19	0.62	0.62	0.40	0.35
d, Delay for Lane Group [s/veh]	42.82	3.00	3.00	0.00	4.50	4.58	38.63	38.62	37.02	48.76
Lane Group LOS	D	A	A	A	A	A	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	1.32	0.48	0.48	0.00	1.09	1.03	1.37	1.37	0.75	0.08
50th-Percentile Queue Length [ft]	33.02	12.00	11.98	0.00	27.18	25.85	34.14	34.15	18.86	1.99
95th-Percentile Queue Length [veh]	2.38	0.86	0.86	0.00	1.96	1.86	2.46	2.46	1.36	0.14
95th-Percentile Queue Length [ft]	59.44	21.59	21.56	0.00	48.92	46.54	61.45	61.47	33.95	3.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.82	3.00	3.00	0.00	4.52	4.58	38.62	38.62	37.02	48.76	48.76	48.76
Movement LOS	D	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	9.97			4.54			38.27			48.76		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	12.68											
Intersection LOS	B											
Intersection V/C	0.247											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Healdsburg Ave/Parkland Farms Blvd

Control Type:	Signalized	Delay (sec / veh):	6.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.949

Intersection Setup

Name	Healdsburg Ave		Healdsburg Ave		Parkland Farms Blvd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	1	0
Pocket Length [ft]	100.00	100.00	150.00	100.00	50.00	100.00
Speed [mph]	35.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Healdsburg Ave		Healdsburg Ave		Parkland Farms Blvd	
Base Volume Input [veh/h]	227	149	34	317	88	7
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	22	0	0	28	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
Right-Turn on Red Volume [veh/h]	0	6	0	0	0	12
Total Hourly Volume [veh/h]	249	143	34	345	88	0
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	67	38	9	93	24	0
Total Analysis Volume [veh/h]	268	154	37	371	95	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	1		3		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	49	0	11	60	20	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	20	20	20	20	20	20
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	5	1	10	2	2
g / C, Green / Cycle	0.25	0.25	0.05	0.50	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.13	0.14	0.02	0.12	0.03	0.03
s, saturation flow rate [veh/h]	1676	1461	1597	3192	1597	1597
c, Capacity [veh/h]	427	372	78	1597	170	170
d1, Uniform Delay [s]	6.46	6.60	9.42	2.87	8.37	8.37
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.89	1.36	4.37	0.07	0.89	0.89
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.49	0.57	0.47	0.23	0.28	0.28
d, Delay for Lane Group [s/veh]	7.35	7.96	13.79	2.95	9.26	9.26
Lane Group LOS	A	A	B	A	A	A
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	0.37	0.41	0.17	0.02	0.14	0.14
50th-Percentile Queue Length [ft]	9.15	10.17	4.27	0.41	3.39	3.39
95th-Percentile Queue Length [veh]	0.66	0.73	0.31	0.03	0.24	0.24
95th-Percentile Queue Length [ft]	16.47	18.31	7.69	0.74	6.10	6.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.48	7.96	13.79	2.95	9.26	9.26
Movement LOS	A	A	B	A	A	A
d_A, Approach Delay [s/veh]	7.65		3.93		9.26	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.18					
Intersection LOS	A					
Intersection V/C	0.949					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 1: US 101 S Ramps/Dry Creek Rd

Control Type: All-way stop
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 27.2
 Level Of Service: D
 Volume to Capacity (v/c): 0.949

Intersection Setup

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	250.00	100.00	100.00
Speed [mph]	30.00			55.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	0	0	0	94	0	19	0	167	76	494	244	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	23	0	100	22	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]	0	0	0	94	0	19	0	190	76	594	266	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9100	0.9100	0.9100	1.0000	0.9100	0.9100	0.9100	0.9100	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]	0	0	0	26	0	5	0	52	21	163	73	0
Total Analysis Volume [veh/h]	0	0	0	103	0	21	0	209	84	653	292	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]		476	567	778	688	760
Degree of Utilization, x		0.22	0.04	0.38	0.95	0.38

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]		0.81	0.12	1.76	13.62	1.81
95th-Percentile Queue Length [ft]		20.37	2.88	44.05	340.61	45.33
Approach Delay [s/veh]	0.00	11.83		10.40	34.43	
Approach LOS	A	B		B	D	
Intersection Delay [s/veh]	27.20					
Intersection LOS	D					

Intersection Level Of Service Report

Intersection 1: US 101 S Ramps/Dry Creek Rd

Control Type:	Signalized	Delay (sec / veh):	18.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.591

Intersection Setup

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			55.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	0	0	0	94	0	19	0	167	76	494	244	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	23	0	100	22	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	94	0	19	0	190	76	594	266	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9100	0.9100	0.9100	1.0000	0.9100	0.9100	0.9100	0.9100	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]	0	0	0	26	0	5	0	52	21	163	73	0
Total Analysis Volume [veh/h]	0	0	0	103	0	21	0	209	84	653	292	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	5	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	42	0	0	9	0	9	18	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	R	C	L	C
C, Cycle Length [s]		60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		5	5	19	24	47
g / C, Green / Cycle		0.08	0.08	0.31	0.41	0.78
(v / s)_i Volume / Saturation Flow Rate		0.06	0.01	0.17	0.37	0.16
s, saturation flow rate [veh/h]		1774	1583	1773	1774	1863
c, Capacity [veh/h]		150	134	546	724	1458
d1, Uniform Delay [s]		26.78	25.56	17.25	16.68	1.68
k, delay calibration		0.11	0.11	0.50	0.15	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		5.52	0.54	3.74	6.12	0.31
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.69	0.16	0.54	0.90	0.20
d, Delay for Lane Group [s/veh]		32.30	26.10	20.99	22.80	1.99
Lane Group LOS		C	C	C	C	A
Critical Lane Group		Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh]		1.46	0.26	3.36	8.47	0.38
50th-Percentile Queue Length [ft]		36.57	6.50	84.04	211.78	9.44
95th-Percentile Queue Length [veh]		2.63	0.47	6.05	13.24	0.68
95th-Percentile Queue Length [ft]		65.83	11.71	151.27	331.11	16.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	32.30	32.30	26.10	0.00	20.99	20.99	22.80	1.99	0.00
Movement LOS				C	C	C		C	C	C	A	
d_A, Approach Delay [s/veh]	0.00			31.25			20.99			16.37		
Approach LOS	A			C			C			B		
d_I, Intersection Delay [s/veh]	18.72											
Intersection LOS	B											
Intersection V/C	0.591											

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 2: US 101 N Ramps/Dry Creek Rd

Control Type:	Two-way stop	Delay (sec / veh):	94.5
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.854

Intersection Setup

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek 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	1	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek Road		
Base Volume Input [veh/h]	125	2	572	0	0	0	8	254	0	0	605	103
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	90	0	0	0	0	23	0	0	122	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]	125	2	662	0	0	0	8	277	0	0	727	103
Peak Hour Factor	0.9000	0.9000	0.9000	1.0000	1.0000	1.0000	0.9000	0.9000	1.0000	1.0000	0.9000	0.9000
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]	35	1	184	0	0	0	2	77	0	0	202	29
Total Analysis Volume [veh/h]	139	2	736	0	0	0	9	308	0	0	808	114
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	2	0	0	0
Two-Stage Gap Acceptance	No			
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.85	0.01	1.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	94.54	93.46	58.34	0.00	0.00	0.00	9.92	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	F	F				A	A			A	A
95th-Percentile Queue Length [veh]	6.03	6.03	16.87	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	150.84	150.84	421.66	0.00	0.00	0.00	0.92	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	64.16			0.00			0.28			0.00		
Approach LOS	F			A			A			A		
d_I, Intersection Delay [s/veh]	26.63											
Intersection LOS	F											

Intersection Level Of Service Report

Intersection 3: Dry Creek Rd/Grove St

Control Type: Signalized
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 54.9
 Level Of Service: D
 Volume to Capacity (v/c): 1.251

Intersection Setup

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
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	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	75.00	100.00	265.00	75.00	100.00	75.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	86	36	41	20	71	145	106	555	125	64	448	31
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	30	12	16	29	92	91	16	6	6	16	17
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
Right-Turn on Red Volume [veh/h]	0	0	14	0	0	67	0	0	27	0	0	3
Total Hourly Volume [veh/h]	100	66	39	36	100	170	197	571	104	70	464	45
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
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]	29	19	11	10	29	49	57	164	30	20	133	13
Total Analysis Volume [veh/h]	115	76	45	41	115	195	226	656	120	80	533	52
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	2			0			0			3		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	67
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	3	6	0	3	6	0
Maximum Green [s]	0	15	0	0	15	0	10	30	0	10	30	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0
Split [s]	0	29	0	0	29	0	13	34	0	13	34	0
Vehicle Extension [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	7	0	0	8	0	0	8	0	0	8	0
Pedestrian Clearance [s]	0	16	0	0	15	0	0	9	0	0	8	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.6	0.0	0.0	1.6	0.0	1.0	2.0	0.0	1.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	L	C	C	L	C	R
C, Cycle Length [s]	67	67	67	67	67	67	67	67	67
L, Total Lost Time per Cycle [s]	3.60	3.60	3.60	3.00	4.00	4.00	3.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.60	1.60	1.60	1.00	2.00	2.00	1.00	2.00	2.00
g_i, Effective Green Time [s]	25	25	25	10	27	27	4	21	21
g / C, Green / Cycle	0.38	0.38	0.38	0.15	0.40	0.40	0.06	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.42	0.03	0.57	0.14	0.24	0.24	0.05	0.32	0.04
s, saturation flow rate [veh/h]	450	1422	619	1597	1676	1586	1597	1676	1395
c, Capacity [veh/h]	256	535	293	238	677	641	98	530	441
d1, Uniform Delay [s]	20.72	13.45	18.75	28.24	15.62	15.62	31.06	22.91	16.27
k, delay calibration	0.50	0.04	0.50	0.37	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	17.97	0.02	117.59	38.79	3.73	3.95	6.00	40.48	0.54
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

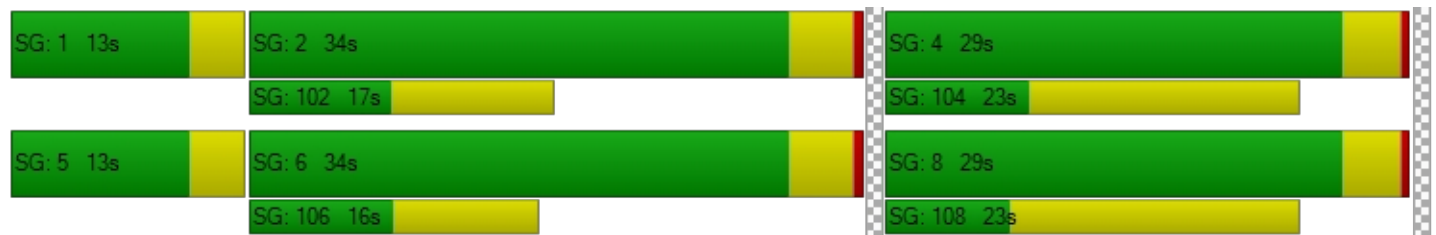
X, volume / capacity	0.75	0.08	1.20	0.95	0.59	0.59	0.81	1.01	0.12
d, Delay for Lane Group [s/veh]	38.69	13.48	136.35	67.03	19.35	19.57	37.06	63.39	16.82
Lane Group LOS	D	B	F	E	B	B	D	F	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	4.12	0.41	12.76	5.98	5.01	4.78	1.39	13.61	0.60
50th-Percentile Queue Length [ft]	103.01	10.20	319.06	149.41	125.19	119.52	34.79	340.21	14.99
95th-Percentile Queue Length [veh]	7.42	0.73	20.67	9.99	8.68	8.37	2.51	19.73	1.08
95th-Percentile Queue Length [ft]	185.41	18.35	516.79	249.65	216.94	209.17	62.63	493.20	26.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.69	38.69	13.48	136.35	136.35	136.35	67.03	19.43	19.57	37.06	63.39	16.82
Movement LOS	D	D	B	F	F	F	E	B	B	D	F	B
d_A, Approach Delay [s/veh]	33.88			136.35			30.18			56.58		
Approach LOS	C			F			C			E		
d_I, Intersection Delay [s/veh]	54.89											
Intersection LOS	D											
Intersection V/C	1.251											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Dry Creek Rd/Grove StControl Type: Signalized
Analysis Method: HCM 2010
Analysis Period: 15 minutesDelay (sec / veh): 37.9
Level Of Service: D
Volume to Capacity (v/c): 0.892**Intersection Setup**

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
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	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	75.00	100.00	265.00	75.00	100.00	75.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	86	36	41	20	71	145	106	555	125	64	448	31
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	30	12	16	29	92	91	16	6	6	16	17
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
Right-Turn on Red Volume [veh/h]	0	0	14	0	0	67	0	0	27	0	0	3
Total Hourly Volume [veh/h]	100	66	39	36	100	170	197	571	104	70	464	45
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
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]	29	19	11	10	29	49	57	164	30	20	133	13
Total Analysis Volume [veh/h]	115	76	45	41	115	195	226	656	120	80	533	52
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	2			0			0			3		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	36	0	0	25	0	18	27	0	27	36	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No			No		No	No		No	No	
Maximum Recall	No	No			No		No	No		No	No	
Pedestrian Recall	No	No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	32	21	14	40	40	6	32	32
g / C, Green / Cycle	0.08	0.36	0.23	0.16	0.45	0.45	0.06	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.07	0.08	0.24	0.14	0.24	0.24	0.05	0.32	0.04
s, saturation flow rate [veh/h]	1597	1572	1453	1597	1676	1586	1597	1676	1395
c, Capacity [veh/h]	124	557	382	253	753	712	101	593	493
d1, Uniform Delay [s]	41.24	20.30	34.89	37.12	17.93	17.94	41.58	27.58	19.54
k, delay calibration	0.11	0.11	0.25	0.11	0.50	0.50	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	23.08	0.19	17.72	10.51	2.66	2.81	13.02	19.11	0.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

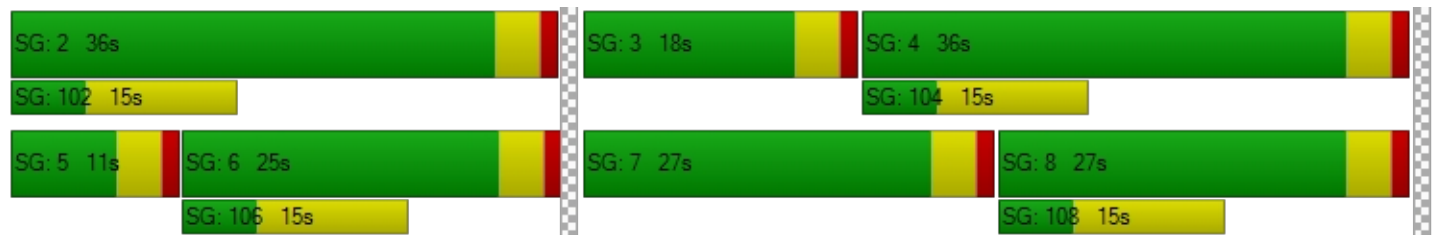
X, volume / capacity	0.93	0.22	0.92	0.89	0.53	0.53	0.79	0.90	0.11
d, Delay for Lane Group [s/veh]	64.33	20.50	52.61	47.63	20.59	20.75	54.60	46.69	19.97
Lane Group LOS	E	C	D	D	C	C	D	D	B
Critical Lane Group	Yes	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	3.30	1.77	9.32	5.53	6.26	5.96	2.09	13.51	0.78
50th-Percentile Queue Length [ft]	82.41	44.14	232.98	138.13	156.45	148.93	52.36	337.77	19.38
95th-Percentile Queue Length [veh]	5.93	3.18	14.33	9.38	10.36	9.96	3.77	19.54	1.40
95th-Percentile Queue Length [ft]	148.33	79.44	358.14	234.50	259.02	249.00	94.25	488.47	34.89

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	64.33	20.50	20.50	52.61	52.61	52.61	47.63	20.66	20.75	54.60	46.69	19.97
Movement LOS	E	C	C	D	D	D	D	C	C	D	D	B
d_A, Approach Delay [s/veh]	41.85			52.61			26.75			45.55		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	37.91											
Intersection LOS	D											
Intersection V/C	0.892											

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 4: Dry Creek Rd-March Ave/Healdsburg Ave

Control Type:	Signalized	Delay (sec / veh):	39.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.672

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	165.00	100.00	100.00	90.00	100.00	100.00	115.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	201	197	36	56	253	117	131	236	189	64	189	36
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	19	23	0	13	17	0	0	13	15	0	10	10
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
Right-Turn on Red Volume [veh/h]	0	0	16	0	0	46	0	0	91	0	0	12
Total Hourly Volume [veh/h]	220	220	20	69	270	71	131	249	113	64	199	34
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
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]	69	69	6	22	84	22	41	78	35	20	62	11
Total Analysis Volume [veh/h]	275	275	25	86	338	89	164	311	141	80	249	43
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	6			6			5			1		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	96
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	6	0	3	6	0	3	6	0	3	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.6	0.0	3.0	3.6	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0
Split [s]	19	29	0	19	29	0	19	29	0	19	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	8	0	0	8	0	0	9	0	0	9	0
Pedestrian Clearance [s]	0	15	0	0	11	0	0	14	0	0	14	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	2.0	0.0	1.0	2.0	0.0	1.0	1.4	0.0	1.0	1.4	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	96	96	96	96	96	96	96	96	96	96	96
L, Total Lost Time per Cycle [s]	3.00	4.00	4.00	3.00	4.00	4.00	3.00	3.40	3.40	3.00	3.40
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	2.00	2.00	1.00	2.00	2.00	1.00	1.40	1.40	1.00	1.40
g_i, Effective Green Time [s]	16	37	37	7	27	27	12	33	33	6	28
g / C, Green / Cycle	0.17	0.38	0.38	0.07	0.28	0.28	0.12	0.35	0.35	0.06	0.29
(v / s)_i Volume / Saturation Flow Rate	0.17	0.09	0.09	0.05	0.13	0.13	0.10	0.19	0.10	0.05	0.18
s, saturation flow rate [veh/h]	1597	1676	1628	1597	1676	1555	1597	1676	1418	1597	1629
c, Capacity [veh/h]	267	639	620	109	474	439	195	582	492	102	470
d1, Uniform Delay [s]	40.05	20.24	20.26	44.09	28.47	28.55	41.28	25.15	22.75	44.35	29.63
k, delay calibration	0.13	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	37.00	0.88	0.91	11.73	3.24	3.61	9.28	3.49	1.46	12.33	6.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

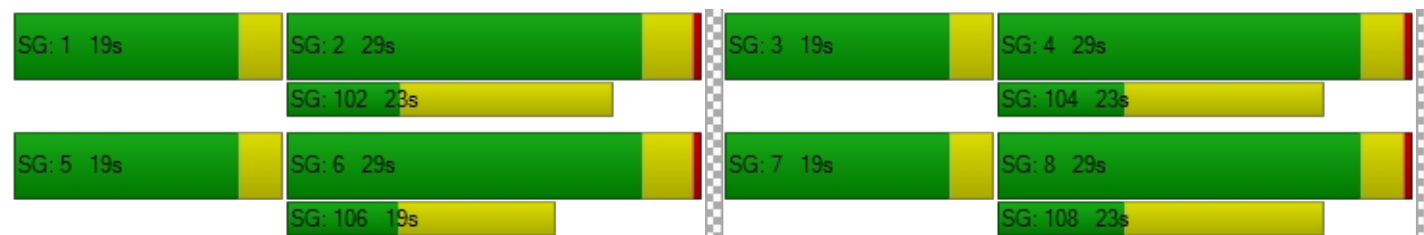
X, volume / capacity	1.03	0.24	0.24	0.79	0.46	0.47	0.84	0.53	0.29	0.78	0.62
d, Delay for Lane Group [s/veh]	77.05	21.12	21.16	55.82	31.71	32.16	50.55	28.64	24.21	56.68	35.68
Lane Group LOS	F	C	C	E	C	C	D	C	C	E	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh]	8.93	2.43	2.38	2.33	4.48	4.28	4.26	6.11	2.47	2.21	6.51
50th-Percentile Queue Length [ft]	223.34	60.71	59.39	58.36	111.91	106.91	106.49	152.78	61.86	55.29	162.86
95th-Percentile Queue Length [veh]	14.04	4.37	4.28	4.20	7.95	7.67	7.64	10.17	4.45	3.98	10.70
95th-Percentile Queue Length [ft]	350.98	109.27	106.90	105.04	198.66	191.70	191.11	254.14	111.35	99.52	267.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	77.05	21.14	21.16	55.82	31.87	32.16	50.55	28.64	24.21	56.68	35.68	35.68
Movement LOS	F	C	C	E	C	C	D	C	C	E	D	D
d_A, Approach Delay [s/veh]	47.88			35.94			33.46			40.19		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	39.27											
Intersection LOS	D											
Intersection V/C	0.672											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 5: Healdsburg Ave/Grove St

Control Type: Signalized
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 12.2
 Level Of Service: B
 Volume to Capacity (v/c): 0.319

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Grove St			Private Dwy		
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	1	0	0	1	0	0	1	0	1	0	0	0
Pocket Length [ft]	150.00	100.00	100.00	80.00	100.00	100.00	135.00	100.00	70.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Grove St			Private Dwy		
Base Volume Input [veh/h]	36	198	2	0	277	139	51	0	52	2	2	1
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	30	0	0	29	84	90	0	1	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	13	0	0	29	0	0	1
Total Hourly Volume [veh/h]	39	228	2	0	306	210	141	0	24	2	2	0
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
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]	12	71	1	0	96	66	44	0	8	1	1	0
Total Analysis Volume [veh/h]	49	285	3	0	383	263	176	0	30	3	3	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			0			0			3		
Bicycle Volume [bicycles/h]	0			1			1			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	3	6	0	3	6	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	15	30	0	0	20	0	0	15	0
Amber [s]	3.0	3.7	0.0	3.0	3.7	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	1.0	0.0
Split [s]	21	35	0	6	20	0	0	19	0	0	20	0
Vehicle Extension [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	2.1	0.0	1.0	2.1	0.0	0.0	1.6	0.0	0.0	2.2	0.0
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	3.00	4.10	4.10	3.00	4.10	4.10	3.60	3.60	3.60	4.20
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	2.10	2.10	1.00	2.10	2.10	1.60	1.60	1.60	2.20
g_i, Effective Green Time [s]	3	59	59	0	56	56	6	6	6	1
g / C, Green / Cycle	0.04	0.73	0.73	0.00	0.70	0.70	0.07	0.07	0.07	0.01
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.08	0.00	0.18	0.19	0.05	0.05	0.02	0.00
s, saturation flow rate [veh/h]	1774	1863	1856	1774	1863	1585	1774	1774	1528	1817
c, Capacity [veh/h]	64	1361	1356	1	1295	1102	131	131	113	16
d1, Uniform Delay [s]	38.26	3.15	3.15	0.00	4.56	4.60	36.15	36.15	35.05	39.51
k, delay calibration	0.04	0.50	0.50	0.04	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.72	0.16	0.16	0.00	0.50	0.62	2.21	2.21	0.46	5.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

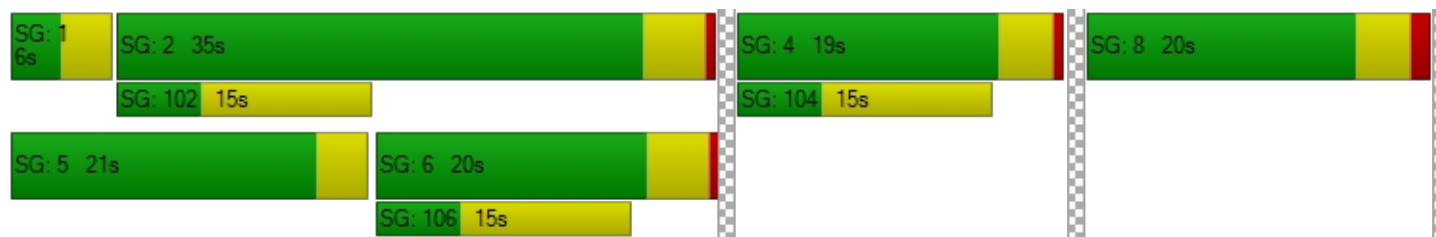
X, volume / capacity	0.76	0.11	0.11	0.00	0.27	0.27	0.67	0.67	0.27	0.39
d, Delay for Lane Group [s/veh]	44.98	3.30	3.30	0.00	5.06	5.21	38.36	38.36	35.51	45.19
Lane Group LOS	D	A	A	A	A	A	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	1.04	0.50	0.50	0.00	1.71	1.55	1.70	1.70	0.55	0.14
50th-Percentile Queue Length [ft]	26.10	12.62	12.60	0.00	42.79	38.68	42.51	42.51	13.74	3.53
95th-Percentile Queue Length [veh]	1.88	0.91	0.91	0.00	3.08	2.78	3.06	3.06	0.99	0.25
95th-Percentile Queue Length [ft]	46.99	22.72	22.68	0.00	77.03	69.62	76.51	76.51	24.74	6.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	44.98	3.30	3.30	0.00	5.08	5.21	38.36	38.36	35.51	45.19	45.19	45.19
Movement LOS	D	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	9.36			5.13			37.95			45.19		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	12.18											
Intersection LOS	B											
Intersection V/C	0.319											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Healdsburg Ave/Parkland Farms Blvd

Control Type:	Signalized	Delay (sec / veh):	6.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.867

Intersection Setup

Name	Healdsburg Ave		Healdsburg Ave		Parkland Farms Blvd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	1	0
Pocket Length [ft]	100.00	100.00	150.00	100.00	50.00	100.00
Speed [mph]	35.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Healdsburg Ave		Healdsburg Ave		Parkland Farms Blvd	
Base Volume Input [veh/h]	185	77	4	248	150	19
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	120	0	1	113	0	2
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
Right-Turn on Red Volume [veh/h]	0	6	0	0	0	12
Total Hourly Volume [veh/h]	305	71	5	361	150	9
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	95	22	2	113	47	3
Total Analysis Volume [veh/h]	381	89	6	451	188	11
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	49	0	11	60	20	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	21	21	21	21	21	21
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	6	0	10	4	4
g / C, Green / Cycle	0.26	0.26	0.01	0.46	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.14	0.15	0.00	0.14	0.06	0.06
s, saturation flow rate [veh/h]	1676	1571	1597	3192	1597	1576
c, Capacity [veh/h]	443	415	16	1469	267	264
d1, Uniform Delay [s]	6.77	6.84	10.57	3.64	7.94	7.95
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.99	1.22	13.82	0.12	0.87	0.88
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.53	0.57	0.37	0.31	0.37	0.38
d, Delay for Lane Group [s/veh]	7.76	8.06	24.39	3.76	8.81	8.83
Lane Group LOS	A	A	C	A	A	A
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	0.47	0.49	0.08	0.02	0.26	0.26
50th-Percentile Queue Length [ft]	11.65	12.21	1.92	0.60	6.48	6.45
95th-Percentile Queue Length [veh]	0.84	0.88	0.14	0.04	0.47	0.46
95th-Percentile Queue Length [ft]	20.96	21.97	3.46	1.08	11.66	11.60

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.87	8.06	24.39	3.76	8.82	8.83
Movement LOS	A	A	C	A	A	A
d_A, Approach Delay [s/veh]	7.91		4.03		8.82	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.50					
Intersection LOS	A					
Intersection V/C	0.867					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 7: Healdsburg Ave/Project Access

Control Type:	Signalized	Delay (sec / veh):	8.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.342

Intersection Setup

Name	Healdsburg Ave		Healdsburg Ave		Project Access Rd	
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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Healdsburg Ave		Healdsburg Ave		Project Access Rd	
Base Volume Input [veh/h]	0	203	252	0	0	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	120	2	0	9	16	114
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	120	205	252	9	16	114
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	57	70	3	4	32
Total Analysis Volume [veh/h]	133	228	280	10	18	127
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Split	Split
Signal group	0	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	0	5	5	0	5	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.0	3.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	19	19	0	41	0
Vehicle Extension [s]	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C
C, Cycle Length [s]	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00
g_i, Effective Green Time [s]	45	45	7
g / C, Green / Cycle	0.75	0.75	0.12
(v / s)_i Volume / Saturation Flow Rate	0.25	0.16	0.09
s, saturation flow rate [veh/h]	1436	1851	1605
c, Capacity [veh/h]	1158	1387	189
d1, Uniform Delay [s]	2.43	2.24	25.69
k, delay calibration	0.50	0.50	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00
d2, Incremental Delay [s]	0.70	0.34	6.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.31	0.21	0.77
d, Delay for Lane Group [s/veh]	3.13	2.59	32.07
Lane Group LOS	A	A	C
Critical Lane Group	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.60	0.42	2.26
50th-Percentile Queue Length [ft]	14.97	10.46	56.47
95th-Percentile Queue Length [veh]	1.08	0.75	4.07
95th-Percentile Queue Length [ft]	26.94	18.82	101.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.13	3.13	2.59	2.59	32.07	32.07
Movement LOS	A	A	A	A	C	C
d_A, Approach Delay [s/veh]	3.13		2.59		32.07	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	8.21					
Intersection LOS	A					
Intersection V/C	0.342					

Sequence

Ring 1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 1: US 101 S Ramps/Dry Creek Rd

Control Type:	All-way stop	Delay (sec / veh):	48.3
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.106

Intersection Setup

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	250.00	100.00	100.00
Speed [mph]	30.00			55.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	0	0	0	80	1	33	0	227	173	568	208	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	28	0	125	25	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]	0	0	0	80	1	33	0	255	173	693	233	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9300	0.9300	0.9300	1.0000	0.9300	0.9300	0.9300	0.9300	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]	0	0	0	22	0	9	0	69	47	186	63	0
Total Analysis Volume [veh/h]	0	0	0	86	1	35	0	274	186	745	251	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]		465	549	789	745	743
Degree of Utilization, x		0.19	0.06	0.58	1.11	0.34

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]		0.68	0.20	3.83	21.76	1.49
95th-Percentile Queue Length [ft]		17.02	5.09	95.83	543.95	37.32
Approach Delay [s/veh]	0.00	11.49		13.73	68.85	
Approach LOS	A	B		B	F	
Intersection Delay [s/veh]	48.35					
Intersection LOS	E					

Intersection Level Of Service Report

Intersection 1: US 101 S Ramps/Dry Creek Rd

Control Type:	Signalized	Delay (sec / veh):	27.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.734

Intersection Setup

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			55.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	0	0	0	80	1	33	0	227	173	568	208	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	28	0	125	25	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	80	1	33	0	255	173	693	233	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9300	0.9300	0.9300	1.0000	0.9300	0.9300	0.9300	0.9300	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]	0	0	0	22	0	9	0	69	47	186	63	0
Total Analysis Volume [veh/h]	0	0	0	86	1	35	0	274	186	745	251	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	5	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	53	0	0	9	0	18	27	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	R	C	L	C
C, Cycle Length [s]		80	80	80	80	80
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		6	6	26	36	66
g / C, Green / Cycle		0.07	0.07	0.33	0.45	0.83
(v / s)_i Volume / Saturation Flow Rate		0.05	0.02	0.26	0.42	0.13
s, saturation flow rate [veh/h]		1775	1583	1739	1774	1863
c, Capacity [veh/h]		128	114	570	799	1542
d1, Uniform Delay [s]		36.24	35.24	24.61	20.87	1.37
k, delay calibration		0.11	0.11	0.50	0.16	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		6.13	1.49	11.66	8.02	0.23
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00

Lane Group Results

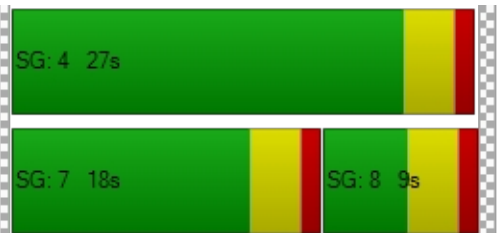
X, volume / capacity		0.68	0.31	0.81	0.93	0.16
d, Delay for Lane Group [s/veh]		42.37	36.74	36.27	28.89	1.60
Lane Group LOS		D	D	D	C	A
Critical Lane Group		Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh]		1.74	0.64	8.96	13.77	0.37
50th-Percentile Queue Length [ft]		43.47	16.06	224.01	344.31	9.19
95th-Percentile Queue Length [veh]		3.13	1.16	13.87	19.86	0.66
95th-Percentile Queue Length [ft]		78.25	28.90	346.74	496.47	16.54

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	42.37	42.37	36.74	0.00	36.27	36.27	28.89	1.60	0.00
Movement LOS				D	D	D		D	D	C	A	
d_A, Approach Delay [s/veh]	0.00			40.76			36.27			22.01		
Approach LOS	A			D			D			C		
d_I, Intersection Delay [s/veh]	27.62											
Intersection LOS	C											
Intersection V/C	0.734											

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 2: US 101 N Ramps/Dry Creek Rd

Control Type: Two-way stop
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 67.0
 Level Of Service: F
 Volume to Capacity (v/c): 0.547

Intersection Setup

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek 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	1	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek Road		
Base Volume Input [veh/h]	62	0	456	0	0	0	14	296	0	0	714	221
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	131	0	0	0	0	28	0	0	150	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]	62	0	587	0	0	0	14	324	0	0	864	221
Peak Hour Factor	0.9600	0.9600	0.9600	1.0000	1.0000	1.0000	0.9600	0.9600	1.0000	1.0000	0.9600	0.9600
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]	16	0	153	0	0	0	4	84	0	0	225	58
Total Analysis Volume [veh/h]	65	0	611	0	0	0	15	338	0	0	900	230
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	2	0	0	0
Two-Stage Gap Acceptance	No			
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.55	0.00	0.87	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	66.97	66.82	34.03	0.00	0.00	0.00	10.97	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	F	D				B	A			A	A
95th-Percentile Queue Length [veh]	2.61	2.61	10.39	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	65.26	65.26	259.85	0.00	0.00	0.00	1.86	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	37.19			0.00			0.47			0.00		
Approach LOS	E			A			A			A		
d_I, Intersection Delay [s/veh]	11.72											
Intersection LOS	F											

Intersection Level Of Service Report

Intersection 3: Dry Creek Rd/Grove St

Control Type: Signalized
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 88.6
 Level Of Service: F
 Volume to Capacity (v/c): 1.519

Intersection Setup

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
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	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	75.00	100.00	265.00	75.00	100.00	75.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	172	54	108	16	71	158	113	500	119	72	572	22
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	41	10	21	43	123	119	21	19	14	15	14
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
Right-Turn on Red Volume [veh/h]	0	0	59	0	0	57	0	0	28	0	0	10
Total Hourly Volume [veh/h]	184	95	59	37	114	224	232	521	110	86	587	26
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
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]	47	24	15	9	29	57	59	133	28	22	150	7
Total Analysis Volume [veh/h]	188	97	60	38	116	229	237	532	112	88	599	27
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	4			0			0			4		
Bicycle Volume [bicycles/h]	4			1			3			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	67
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	3	6	0	3	6	0
Maximum Green [s]	0	15	0	0	15	0	10	30	0	10	30	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0
Split [s]	0	29	0	0	29	0	13	34	0	13	34	0
Vehicle Extension [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	7	0	0	8	0	0	8	0	0	8	0
Pedestrian Clearance [s]	0	16	0	0	15	0	0	9	0	0	8	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.6	0.0	0.0	1.6	0.0	1.0	2.0	0.0	1.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	L	C	C	L	C	R
C, Cycle Length [s]	67	67	67	67	67	67	67	67	67
L, Total Lost Time per Cycle [s]	3.60	3.60	3.60	3.00	4.00	4.00	3.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.60	1.60	1.60	1.00	2.00	2.00	1.00	2.00	2.00
g_i, Effective Green Time [s]	25	25	25	10	27	27	5	21	21
g / C, Green / Cycle	0.38	0.38	0.38	0.15	0.40	0.40	0.07	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.74	0.04	0.60	0.15	0.20	0.20	0.06	0.36	0.02
s, saturation flow rate [veh/h]	384	1400	637	1597	1676	1559	1597	1676	1425
c, Capacity [veh/h]	234	528	299	238	664	618	109	528	449
d1, Uniform Delay [s]	24.62	13.57	18.73	28.47	15.22	15.26	30.79	22.94	16.01
k, delay calibration	0.50	0.04	0.50	0.41	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	130.00	0.03	148.93	51.52	2.67	2.94	5.28	81.44	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

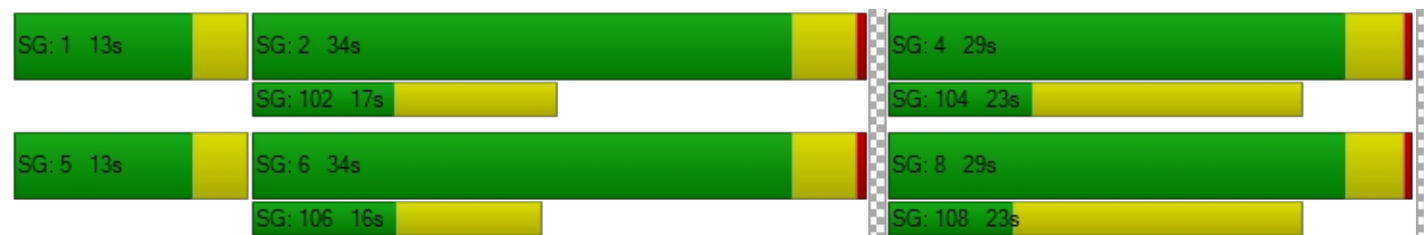
X, volume / capacity	1.22	0.11	1.28	0.99	0.50	0.51	0.81	1.13	0.06
d, Delay for Lane Group [s/veh]	154.62	13.60	167.66	79.99	17.89	18.20	36.07	104.38	16.27
Lane Group LOS	F	B	F	E	B	B	D	F	B
Critical Lane Group	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	12.14	0.55	15.69	7.01	3.95	3.77	1.51	19.58	0.30
50th-Percentile Queue Length [ft]	303.50	13.74	392.22	175.36	98.83	94.24	37.66	489.39	7.59
95th-Percentile Queue Length [veh]	19.95	0.99	25.48	11.36	7.12	6.78	2.71	28.95	0.55
95th-Percentile Queue Length [ft]	498.73	24.74	636.90	283.95	177.89	169.62	67.79	723.70	13.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	154.62	154.62	13.60	167.66	167.66	167.66	79.99	18.01	18.20	36.07	104.38	16.27
Movement LOS	F	F	B	F	F	F	E	B	B	D	F	B
d_A, Approach Delay [s/veh]	130.10			167.66			34.71			92.63		
Approach LOS	F			F			C			F		
d_I, Intersection Delay [s/veh]	88.60											
Intersection LOS	F											
Intersection V/C	1.519											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 3: Dry Creek Rd/Grove St

Control Type: Signalized
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 54.8
 Level Of Service: D
 Volume to Capacity (v/c): 1.006

Intersection Setup

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
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	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	75.00	100.00	265.00	75.00	100.00	75.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	172	54	108	16	71	158	113	500	119	72	572	22
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	41	10	21	43	123	119	21	19	14	15	14
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
Right-Turn on Red Volume [veh/h]	0	0	64	0	0	100	0	0	40	0	0	10
Total Hourly Volume [veh/h]	184	95	54	37	114	181	232	521	98	86	587	26
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
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]	47	24	14	9	29	46	59	133	25	22	150	7
Total Analysis Volume [veh/h]	188	97	55	38	116	185	237	532	100	88	599	27
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	4			0			0			4		
Bicycle Volume [bicycles/h]	4			1			3			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	38	0	0	24	0	17	20	0	32	35	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No			No		No	No		No	No	
Maximum Recall	No	No			No		No	No		No	No	
Pedestrian Recall	No	No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	34	20	13	38	38	6	31	31
g / C, Green / Cycle	0.11	0.38	0.22	0.15	0.42	0.42	0.07	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.12	0.10	0.25	0.15	0.19	0.20	0.06	0.36	0.02
s, saturation flow rate [veh/h]	1597	1565	1364	1597	1676	1569	1597	1676	1425
c, Capacity [veh/h]	177	591	347	234	704	659	111	575	489
d1, Uniform Delay [s]	40.00	19.31	36.15	38.42	18.80	18.85	41.23	29.57	19.81
k, delay calibration	0.11	0.11	0.26	0.11	0.50	0.50	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	48.42	0.23	29.83	31.11	2.17	2.37	11.88	48.91	0.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

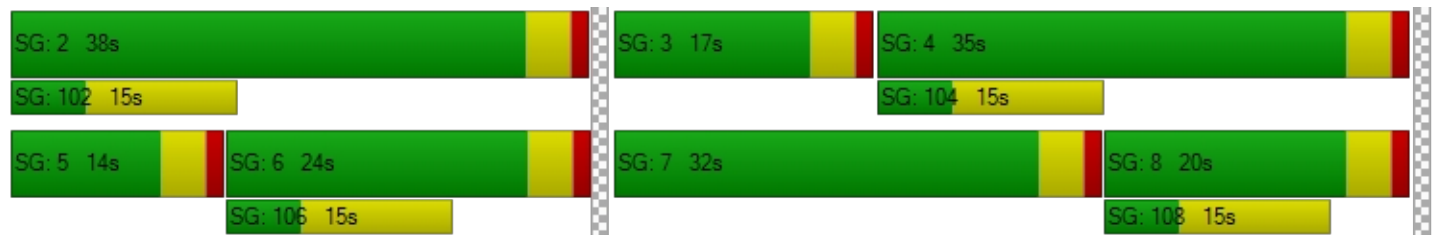
X, volume / capacity	1.06	0.26	0.98	1.01	0.46	0.47	0.79	1.04	0.06
d, Delay for Lane Group [s/veh]	88.42	19.54	65.98	69.53	20.97	21.21	53.11	78.48	20.02
Lane Group LOS	F	B	E	F	C	C	D	F	C
Critical Lane Group	Yes	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	6.25	2.17	10.25	7.07	5.11	4.88	2.26	19.65	0.40
50th-Percentile Queue Length [ft]	156.16	54.28	256.28	176.83	127.69	121.90	56.61	491.13	10.04
95th-Percentile Queue Length [veh]	10.57	3.91	15.50	11.51	8.81	8.50	4.08	27.67	0.72
95th-Percentile Queue Length [ft]	264.37	97.71	387.55	287.71	220.36	212.43	101.89	691.64	18.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	88.42	19.54	19.54	65.98	65.98	65.98	69.53	21.07	21.21	53.11	78.48	20.02
Movement LOS	F	B	B	E	E	E	F	C	C	D	F	C
d_A, Approach Delay [s/veh]	57.63			65.98			34.30			73.15		
Approach LOS	E			E			C			E		
d_I, Intersection Delay [s/veh]	54.82											
Intersection LOS	D											
Intersection V/C	1.006											

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 4: Dry Creek Rd-March Ave/Healdsburg Ave

Control Type:	Signalized	Delay (sec / veh):	35.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.690

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	165.00	100.00	100.00	90.00	100.00	100.00	115.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	193	274	59	76	311	163	167	186	175	57	249	39
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	34	0	20	40	0	4	11	19	0	14	21
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
Right-Turn on Red Volume [veh/h]	0	0	12	0	0	53	0	0	82	0	0	15
Total Hourly Volume [veh/h]	211	308	47	96	351	110	171	197	112	57	263	45
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	56	81	12	25	92	29	45	52	29	15	69	12
Total Analysis Volume [veh/h]	222	324	49	101	369	116	180	207	118	60	277	47
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	4			2			7			2		
Bicycle Volume [bicycles/h]	1			2			1			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	96
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	6	0	3	6	0	3	6	0	3	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.6	0.0	3.0	3.6	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0
Split [s]	19	29	0	19	29	0	19	29	0	19	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	8	0	0	8	0	0	9	0	0	9	0
Pedestrian Clearance [s]	0	15	0	0	11	0	0	14	0	0	14	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	2.0	0.0	1.0	2.0	0.0	1.0	1.4	0.0	1.0	1.4	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	96	96	96	96	96	96	96	96	96	96	96
L, Total Lost Time per Cycle [s]	3.00	4.00	4.00	3.00	4.00	4.00	3.00	3.40	3.40	3.00	3.40
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	2.00	2.00	1.00	2.00	2.00	1.00	1.40	1.40	1.00	1.40
g_i, Effective Green Time [s]	15	35	35	8	27	27	13	36	36	5	28
g / C, Green / Cycle	0.16	0.36	0.36	0.08	0.28	0.28	0.13	0.37	0.37	0.05	0.29
(v / s)_i Volume / Saturation Flow Rate	0.14	0.11	0.12	0.06	0.15	0.15	0.11	0.12	0.08	0.04	0.20
s, saturation flow rate [veh/h]	1597	1676	1589	1597	1676	1524	1597	1676	1403	1597	1634
c, Capacity [veh/h]	252	604	573	127	473	430	211	625	523	77	471
d1, Uniform Delay [s]	39.58	22.18	22.22	43.48	29.15	29.28	40.78	21.59	20.66	45.27	30.38
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.57	1.36	1.47	10.66	4.23	4.88	9.27	1.42	1.00	15.72	7.98
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

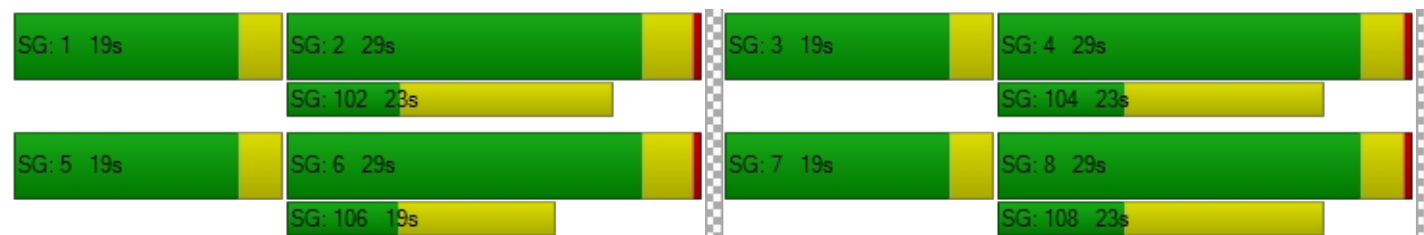
X, volume / capacity	0.88	0.31	0.32	0.80	0.53	0.54	0.85	0.33	0.23	0.78	0.69
d, Delay for Lane Group [s/veh]	49.15	23.54	23.68	54.14	33.38	34.16	50.05	23.01	21.67	60.99	38.36
Lane Group LOS	D	C	C	D	C	C	D	C	C	E	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh]	5.72	3.27	3.16	2.69	5.29	5.01	4.66	3.52	1.93	1.74	7.55
50th-Percentile Queue Length [ft]	143.11	81.70	79.01	67.27	132.32	125.37	116.47	87.91	48.23	43.50	188.75
95th-Percentile Queue Length [veh]	9.65	5.88	5.69	4.84	9.07	8.69	8.20	6.33	3.47	3.13	12.06
95th-Percentile Queue Length [ft]	241.20	147.05	142.23	121.08	226.65	217.18	204.97	158.24	86.82	78.30	301.40

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.15	23.60	23.68	54.14	33.63	34.16	50.05	23.01	21.67	60.99	38.36	38.36
Movement LOS	D	C	C	D	C	C	D	C	C	E	D	D
d_A, Approach Delay [s/veh]	33.14			37.27			32.33			41.89		
Approach LOS	C			D			C			D		
d_I, Intersection Delay [s/veh]	35.74											
Intersection LOS	D											
Intersection V/C	0.690											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 5: Healdsburg Ave/Grove St

Control Type: Signalized
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 14.1
 Level Of Service: B
 Volume to Capacity (v/c): 0.351

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Grove St			Private Dwy		
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	1	0	0	1	0	0	1	0	1	0	0	0
Pocket Length [ft]	150.00	100.00	100.00	80.00	100.00	100.00	135.00	100.00	70.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Grove St			Private Dwy		
Base Volume Input [veh/h]	47	269	3	0	309	104	113	1	63	3	0	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	47	0	0	50	147	118	0	10	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	18	0	0	36	0	0	0
Total Hourly Volume [veh/h]	59	316	3	0	359	233	231	1	37	3	0	0
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]	16	86	1	0	98	63	63	0	10	1	0	0
Total Analysis Volume [veh/h]	64	343	3	0	390	253	251	1	40	3	0	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	1			0			0			3		
Bicycle Volume [bicycles/h]	2			3			1			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	3	6	0	3	6	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	15	30	0	0	20	0	0	15	0
Amber [s]	3.0	3.7	0.0	3.0	3.7	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	1.0	0.0
Split [s]	21	35	0	6	20	0	0	19	0	0	20	0
Vehicle Extension [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	2.1	0.0	1.0	2.1	0.0	0.0	1.6	0.0	0.0	2.2	0.0
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	3.00	4.10	4.10	3.00	4.10	4.10	3.60	3.60	3.60	4.20
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	2.10	2.10	1.00	2.10	2.10	1.60	1.60	1.60	2.20
g_i, Effective Green Time [s]	4	57	57	0	53	53	8	8	8	0
g / C, Green / Cycle	0.05	0.71	0.71	0.00	0.67	0.67	0.10	0.10	0.10	0.00
(v / s)_i Volume / Saturation Flow Rate	0.04	0.09	0.09	0.00	0.18	0.19	0.07	0.07	0.03	0.00
s, saturation flow rate [veh/h]	1774	1863	1856	1774	1863	1592	1774	1775	1556	1774
c, Capacity [veh/h]	84	1328	1324	1	1241	1061	169	169	149	8
d1, Uniform Delay [s]	37.70	3.64	3.64	0.00	5.46	5.51	35.28	35.28	33.64	39.74
k, delay calibration	0.04	0.50	0.50	0.04	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.13	0.20	0.20	0.00	0.55	0.67	2.42	2.42	0.36	9.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

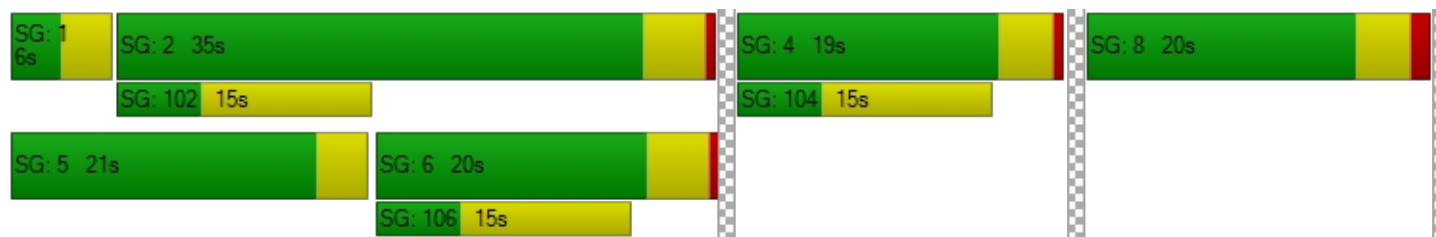
X, volume / capacity	0.76	0.13	0.13	0.00	0.27	0.28	0.74	0.74	0.27	0.35
d, Delay for Lane Group [s/veh]	42.82	3.84	3.84	0.00	6.01	6.18	37.70	37.69	34.00	48.76
Lane Group LOS	D	A	A	A	A	A	D	D	C	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	1.32	0.70	0.69	0.00	1.98	1.79	2.42	2.42	0.71	0.08
50th-Percentile Queue Length [ft]	33.02	17.38	17.35	0.00	49.47	44.82	60.52	60.54	17.83	1.99
95th-Percentile Queue Length [veh]	2.38	1.25	1.25	0.00	3.56	3.23	4.36	4.36	1.28	0.14
95th-Percentile Queue Length [ft]	59.44	31.29	31.24	0.00	89.04	80.68	108.94	108.97	32.09	3.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.82	3.84	3.84	0.00	6.03	6.18	37.70	37.69	34.00	48.76	48.76	48.76
Movement LOS	D	A	A	A	A	A	D	D	C	D	D	D
d_A, Approach Delay [s/veh]	9.93			6.09			37.19			48.76		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	14.09											
Intersection LOS	B											
Intersection V/C	0.351											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Healdsburg Ave/Parkland Farms Blvd

Control Type:	Signalized	Delay (sec / veh):	6.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.874

Intersection Setup

Name	Healdsburg Ave		Healdsburg Ave		Parkland Farms Blvd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	1	0
Pocket Length [ft]	100.00	100.00	150.00	100.00	50.00	100.00
Speed [mph]	35.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Healdsburg Ave		Healdsburg Ave		Parkland Farms Blvd	
Base Volume Input [veh/h]	227	149	34	317	88	7
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	165	0	5	197	0	4
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
Right-Turn on Red Volume [veh/h]	0	6	0	0	0	12
Total Hourly Volume [veh/h]	392	143	39	514	88	0
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	105	38	10	138	24	0
Total Analysis Volume [veh/h]	422	154	42	553	95	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	1		3		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	49	0	11	60	20	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	22	22	22	22	22	22
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	7	1	12	2	2
g / C, Green / Cycle	0.31	0.31	0.05	0.54	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.17	0.19	0.03	0.17	0.03	0.03
s, saturation flow rate [veh/h]	1676	1513	1597	3192	1597	1597
c, Capacity [veh/h]	518	467	85	1725	163	163
d1, Uniform Delay [s]	6.46	6.60	10.30	2.86	9.30	9.30
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.94	1.33	4.45	0.11	0.98	0.98
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.56	0.62	0.50	0.32	0.29	0.29
d, Delay for Lane Group [s/veh]	7.39	7.93	14.75	2.96	10.28	10.28
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	0.54	0.59	0.21	0.03	0.16	0.16
50th-Percentile Queue Length [ft]	13.57	14.74	5.34	0.64	4.11	4.11
95th-Percentile Queue Length [veh]	0.98	1.06	0.38	0.05	0.30	0.30
95th-Percentile Queue Length [ft]	24.43	26.54	9.61	1.15	7.40	7.40

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.56	7.93	14.75	2.96	10.28	10.28
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	7.66		3.80		10.28	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	6.04					
Intersection LOS	A					
Intersection V/C	0.874					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 7: Healdsburg Ave/Project Access

Control Type:	Signalized	Delay (sec / veh):	9.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.464

Intersection Setup

Name	Healdsburg Ave		Healdsburg Ave		Project Access Rd	
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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Healdsburg Ave		Healdsburg Ave		Project Access Rd	
Base Volume Input [veh/h]	0	234	351	0	0	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	147	22	28	17	13	174
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	147	256	379	17	13	174
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	69	102	5	3	47
Total Analysis Volume [veh/h]	158	275	408	18	14	187
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Split	Split
Signal group	0	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	0	5	5	0	5	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.0	3.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	19	19	0	41	0
Vehicle Extension [s]	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C
C, Cycle Length [s]	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00
g_i, Effective Green Time [s]	43	43	10
g / C, Green / Cycle	0.71	0.71	0.16
(v / s)_i Volume / Saturation Flow Rate	0.34	0.23	0.13
s, saturation flow rate [veh/h]	1280	1849	1595
c, Capacity [veh/h]	987	1308	254
d1, Uniform Delay [s]	4.28	3.34	24.29
k, delay calibration	0.50	0.50	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00
d2, Incremental Delay [s]	1.42	0.66	5.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00

Lane Group Results

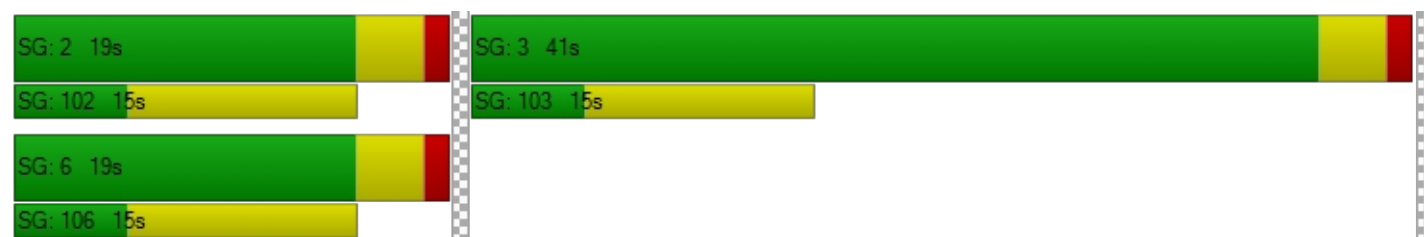
X, volume / capacity	0.44	0.33	0.79
d, Delay for Lane Group [s/veh]	5.69	4.00	29.78
Lane Group LOS	A	A	C
Critical Lane Group	Yes	No	Yes
50th-Percentile Queue Length [veh]	1.25	1.09	3.00
50th-Percentile Queue Length [ft]	31.24	27.15	75.08
95th-Percentile Queue Length [veh]	2.25	1.95	5.41
95th-Percentile Queue Length [ft]	56.23	48.87	135.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	5.69	5.69	4.00	4.00	29.78	29.78
Movement LOS	A	A	A	A	C	C
d_A, Approach Delay [s/veh]	5.69		4.00		29.78	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	9.58					
Intersection LOS	A					
Intersection V/C	0.464					

Sequence

Ring 1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 1: US 101 S Ramps/Dry Creek Rd

Control Type:	Signalized	Delay (sec / veh):	17.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.497

Intersection Setup

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	250.00	100.00	100.00
Speed [mph]	30.00			55.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	0	0	0	108	0	24	0	181	151	602	258	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	108	0	24	0	181	151	602	258	0
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]	0	0	0	27	0	6	0	45	38	151	65	0
Total Analysis Volume [veh/h]	0	0	0	108	0	24	0	181	151	602	258	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	5	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	42	0	0	9	0	9	18	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	R	C	R	L	C
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		5	5	20	20	23	47
g / C, Green / Cycle		0.09	0.09	0.33	0.33	0.38	0.78
(v / s)_i Volume / Saturation Flow Rate		0.06	0.02	0.10	0.10	0.34	0.14
s, saturation flow rate [veh/h]		1774	1583	1863	1583	1774	1863
c, Capacity [veh/h]		157	140	619	526	673	1450
d1, Uniform Delay [s]		26.62	25.38	14.85	14.82	17.52	1.71
k, delay calibration		0.11	0.11	0.50	0.50	0.12	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		5.27	0.57	1.20	1.37	4.93	0.27
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.69	0.17	0.29	0.29	0.89	0.18
d, Delay for Lane Group [s/veh]		31.89	25.95	16.04	16.19	22.45	1.98
Lane Group LOS		C	C	B	B	C	A
Critical Lane Group		Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		1.52	0.30	1.72	1.46	7.74	0.35
50th-Percentile Queue Length [ft]		37.97	7.39	42.99	36.52	193.49	8.67
95th-Percentile Queue Length [veh]		2.73	0.53	3.10	2.63	12.30	0.62
95th-Percentile Queue Length [ft]		68.35	13.30	77.38	65.73	307.55	15.61

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	31.89	31.89	25.95	0.00	16.04	16.19	22.45	1.98	0.00
Movement LOS				C	C	C		B	B	C	A	
d_A, Approach Delay [s/veh]	0.00			30.81			16.11			16.31		
Approach LOS	A			C			B			B		
d_I, Intersection Delay [s/veh]	17.71											
Intersection LOS	B											
Intersection V/C	0.497											

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 2: US 101 N Ramps/Dry Creek Rd

Control Type:	Signalized	Delay (sec / veh):	33.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.748

Intersection Setup

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek 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	1	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek Road		
Base Volume Input [veh/h]	129	2	826	0	0	0	8	280	0	0	708	138
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	250	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	129	2	576	0	0	0	8	280	0	0	708	138
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	1	144	0	0	0	2	70	0	0	177	35
Total Analysis Volume [veh/h]	129	2	576	0	0	0	8	280	0	0	708	138
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	5	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	30	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	65	0	0	0	0	9	55	0	0	46	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R		L	C	C	R
C, Cycle Length [s]	120	120		120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	46	46		1	66	61	61
g / C, Green / Cycle	0.38	0.38		0.01	0.55	0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.07	0.36		0.00	0.15	0.38	0.09
s, saturation flow rate [veh/h]	1775	1583		1774	1863	1863	1583
c, Capacity [veh/h]	682	608		18	1023	942	801
d1, Uniform Delay [s]	24.56	35.76		59.03	14.35	23.65	16.06
k, delay calibration	0.11	0.26		0.11	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.14	16.29		15.99	0.66	5.51	0.47
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

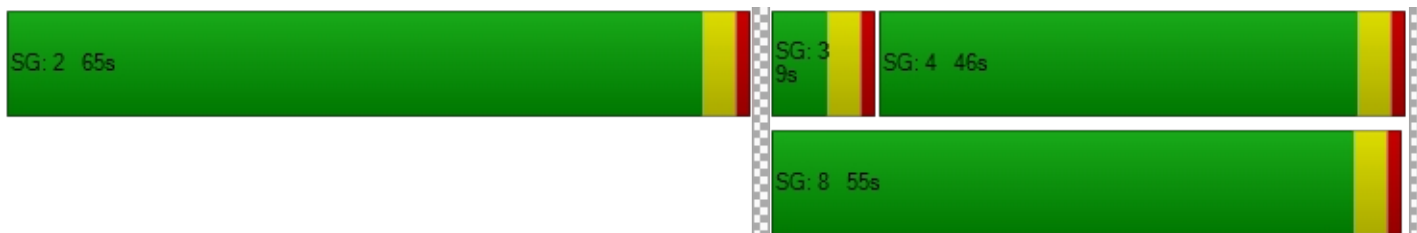
X, volume / capacity	0.19	0.95		0.44	0.27	0.75	0.17
d, Delay for Lane Group [s/veh]	24.70	52.05		75.02	15.01	29.16	16.53
Lane Group LOS	C	D		E	B	C	B
Critical Lane Group	No	Yes		Yes	No	Yes	No
50th-Percentile Queue Length [veh]	2.36	17.69		0.32	4.19	16.97	2.16
50th-Percentile Queue Length [ft]	58.98	442.21		8.06	104.78	424.15	53.97
95th-Percentile Queue Length [veh]	4.25	24.59		0.58	7.54	23.72	3.89
95th-Percentile Queue Length [ft]	106.16	614.65		14.51	188.61	593.02	97.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.70	24.70	52.05	0.00	0.00	0.00	75.02	15.01	0.00	0.00	29.16	16.53
Movement LOS	C	C	D				E	B			C	B
d_A, Approach Delay [s/veh]	46.98			0.00			16.68			27.10		
Approach LOS	D			A			B			C		
d_I, Intersection Delay [s/veh]	33.11											
Intersection LOS	C											
Intersection V/C	0.748											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 3: Dry Creek Rd/Grove St

Control Type: Signalized
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 24.3
 Level Of Service: C
 Volume to Capacity (v/c): 0.659

Intersection Setup

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
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	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	125.00	100.00	265.00	75.00	100.00	75.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	100	58	53	36	88	195	210	711	145	70	539	56
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	14	0	0	67	0	0	27	0	0	3
Total Hourly Volume [veh/h]	100	58	39	36	88	128	210	711	118	70	539	53
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]	25	15	10	9	22	32	53	178	30	18	135	13
Total Analysis Volume [veh/h]	100	58	39	36	88	128	210	711	118	70	539	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	2			0			0			3		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	29	0	0	19	0	20	19	0	22	21	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No			No		No	No		No	No	
Maximum Recall	No	No			No		No	No		No	No	
Pedestrian Recall	No	No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	23	14	11	31	31	4	24	24
g / C, Green / Cycle	0.08	0.33	0.20	0.16	0.44	0.44	0.05	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.06	0.06	0.17	0.13	0.25	0.25	0.04	0.18	0.18
s, saturation flow rate [veh/h]	1597	1564	1473	1597	1676	1593	1597	1676	1617
c, Capacity [veh/h]	124	518	348	251	742	706	87	570	550
d1, Uniform Delay [s]	31.78	16.70	27.18	28.62	14.56	14.56	32.72	18.57	18.60
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.67	0.17	2.86	7.19	3.19	3.36	15.48	3.45	3.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

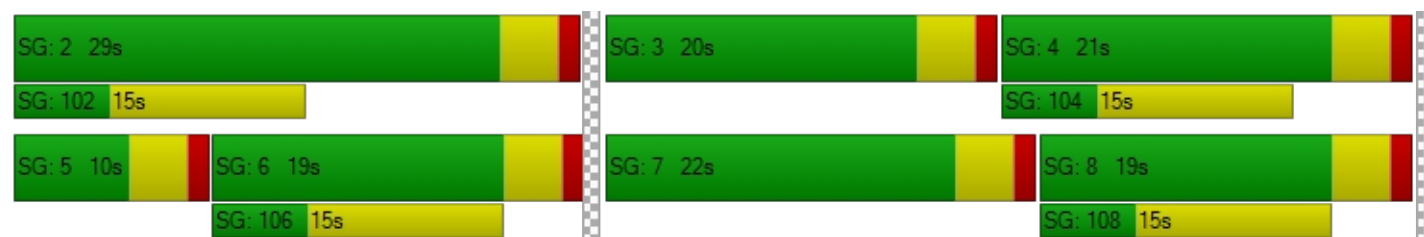
X, volume / capacity	0.81	0.19	0.72	0.84	0.57	0.57	0.80	0.53	0.53
d, Delay for Lane Group [s/veh]	43.45	16.87	30.03	35.82	17.75	17.92	48.21	22.02	22.24
Lane Group LOS	D	B	C	D	B	B	D	C	C
Critical Lane Group	Yes	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	2.01	1.07	4.08	3.77	5.17	4.95	1.51	4.18	4.09
50th-Percentile Queue Length [ft]	50.19	26.85	102.06	94.18	129.22	123.78	37.75	104.41	102.23
95th-Percentile Queue Length [veh]	3.61	1.93	7.35	6.78	8.90	8.60	2.72	7.52	7.36
95th-Percentile Queue Length [ft]	90.34	48.33	183.70	169.53	222.44	215.01	67.94	187.93	184.01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	43.45	16.87	16.87	30.03	30.03	30.03	35.82	17.82	17.92	48.21	22.12	22.24
Movement LOS	D	B	B	C	C	C	D	B	B	D	C	C
d_A, Approach Delay [s/veh]	30.36			30.03			21.47			24.89		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	24.34											
Intersection LOS	C											
Intersection V/C	0.659											

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Dry Creek Rd-March Ave/Healdsburg Ave

Control Type:	Signalized	Delay (sec / veh):	50.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.658

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	165.00	100.00	100.00	90.00	100.00	100.00	115.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	255	281	36	62	265	177	235	274	207	64	199	41
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	16	0	0	46	0	0	91	0	0	12
Total Hourly Volume [veh/h]	255	281	20	62	265	131	235	274	116	64	199	29
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]	64	70	5	16	66	33	59	69	29	16	50	7
Total Analysis Volume [veh/h]	255	281	20	62	265	131	235	274	116	64	199	29
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	6			6			5			1		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	22	0	9	19	0	0	19	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	27	27	4	23	23	14	14	14	9	9
g / C, Green / Cycle	0.11	0.39	0.39	0.05	0.33	0.33	0.20	0.20	0.20	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.16	0.09	0.09	0.04	0.12	0.13	0.15	0.16	0.08	0.09	0.09
s, saturation flow rate [veh/h]	1597	1676	1637	1597	1676	1489	1597	1676	1412	1642	1461
c, Capacity [veh/h]	184	654	639	83	548	487	323	340	286	210	186
d1, Uniform Delay [s]	31.09	14.37	14.38	32.85	18.14	18.23	26.19	26.70	24.34	29.49	29.54
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	181.74	0.83	0.86	12.46	1.97	2.34	3.12	4.55	0.92	4.88	5.74
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

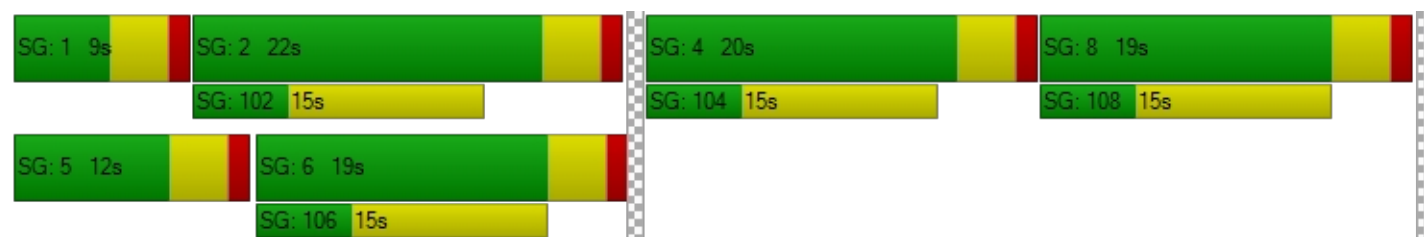
X, volume / capacity	1.39	0.23	0.23	0.75	0.38	0.39	0.73	0.81	0.41	0.73	0.74
d, Delay for Lane Group [s/veh]	212.83	15.20	15.23	45.30	20.11	20.57	29.31	31.25	25.26	34.38	35.28
Lane Group LOS	F	B	B	D	C	C	C	C	C	C	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	12.26	1.65	1.62	1.28	2.65	2.48	3.77	4.58	1.67	2.68	2.46
50th-Percentile Queue Length [ft]	306.47	41.19	40.52	31.98	66.14	62.09	94.22	114.39	41.84	66.90	61.49
95th-Percentile Queue Length [veh]	20.19	2.97	2.92	2.30	4.76	4.47	6.78	8.08	3.01	4.82	4.43
95th-Percentile Queue Length [ft]	504.69	74.14	72.93	57.56	119.04	111.75	169.59	202.09	75.31	120.42	110.69

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	212.83	15.21	15.23	45.30	20.21	20.57	29.31	31.25	25.26	34.38	34.87	35.28
Movement LOS	F	B	B	D	C	C	C	C	C	C	C	D
d_A, Approach Delay [s/veh]	105.85			23.71			29.41			34.80		
Approach LOS	F			C			C			C		
d_I, Intersection Delay [s/veh]	50.88											
Intersection LOS	D											
Intersection V/C	0.658											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 5: Healdsburg Ave/Grove St

Control Type: Signalized
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 8.1
 Level Of Service: A
 Volume to Capacity (v/c): 0.224

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Grove St			Private Dwy		
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	1	0	0	1	0	0	1	0	1	0	0	0
Pocket Length [ft]	150.00	100.00	100.00	80.00	100.00	100.00	135.00	100.00	70.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Grove St			Private Dwy		
Base Volume Input [veh/h]	39	403	2	0	361	166	63	0	53	2	2	1
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	13	0	0	29	0	0	1
Total Hourly Volume [veh/h]	39	403	2	0	361	153	63	0	24	2	2	0
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]	10	101	1	0	90	38	16	0	6	1	1	0
Total Analysis Volume [veh/h]	39	403	2	0	361	153	63	0	24	2	2	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			0			0			3		
Bicycle Volume [bicycles/h]	0			1			1			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	3	6	0	3	6	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	15	30	0	0	20	0	0	15	0
Amber [s]	3.0	3.7	0.0	3.0	3.7	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	1.0	0.0
Split [s]	21	35	0	6	20	0	0	19	0	0	20	0
Vehicle Extension [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	2.1	0.0	1.0	2.1	0.0	0.0	1.6	0.0	0.0	2.2	0.0
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	3.00	4.10	4.10	3.00	4.10	4.10	3.60	3.60	3.60	4.20
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	2.10	2.10	1.00	2.10	2.10	1.60	1.60	1.60	2.20
g_i, Effective Green Time [s]	2	60	60	0	58	58	4	4	4	0
g / C, Green / Cycle	0.03	0.75	0.75	0.00	0.73	0.73	0.05	0.05	0.05	0.01
(v / s)_i Volume / Saturation Flow Rate	0.02	0.11	0.11	0.00	0.14	0.15	0.02	0.02	0.02	0.00
s, saturation flow rate [veh/h]	1774	1863	1859	1774	1863	1656	1774	1774	1515	1817
c, Capacity [veh/h]	51	1402	1400	1	1350	1201	96	96	82	11
d1, Uniform Delay [s]	38.64	2.74	2.74	0.00	3.54	3.56	36.47	36.47	36.40	39.66
k, delay calibration	0.04	0.50	0.50	0.04	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.60	0.22	0.22	0.00	0.33	0.39	0.72	0.72	0.72	7.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

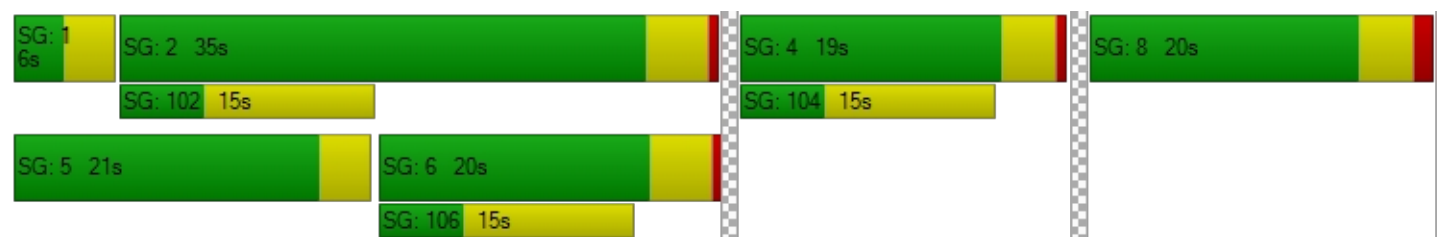
X, volume / capacity	0.77	0.14	0.14	0.00	0.20	0.21	0.33	0.33	0.29	0.36
d, Delay for Lane Group [s/veh]	47.24	2.96	2.96	0.00	3.87	3.95	37.20	37.20	37.12	46.90
Lane Group LOS	D	A	A	A	A	A	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	0.86	0.62	0.62	0.00	1.05	0.99	0.59	0.59	0.45	0.10
50th-Percentile Queue Length [ft]	21.49	15.53	15.52	0.00	26.32	24.77	14.86	14.86	11.34	2.50
95th-Percentile Queue Length [veh]	1.55	1.12	1.12	0.00	1.89	1.78	1.07	1.07	0.82	0.18
95th-Percentile Queue Length [ft]	38.68	27.96	27.93	0.00	47.37	44.58	26.75	26.75	20.41	4.51

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.24	2.96	2.96	0.00	3.89	3.95	37.20	37.20	37.12	46.90	46.90	46.90
Movement LOS	D	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	6.85			3.91			37.18			46.90		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	8.08											
Intersection LOS	A											
Intersection V/C	0.224											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Healdsburg Ave/Parkland Farms Blvd

Control Type:	Signalized	Delay (sec / veh):	6.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.876

Intersection Setup

Name	Healdsburg Ave		Healdsburg Ave		Parkland Farms Blvd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	1	0
Pocket Length [ft]	100.00	100.00	150.00	100.00	50.00	100.00
Speed [mph]	35.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Healdsburg Ave		Healdsburg Ave		Parkland Farms Blvd	
Base Volume Input [veh/h]	405	79	6	368	150	40
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	6	0	0	0	12
Total Hourly Volume [veh/h]	405	73	6	368	150	28
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]	101	18	2	92	38	7
Total Analysis Volume [veh/h]	405	73	6	368	150	28
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	49	0	11	60	20	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	21	21	21	21	21	21
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	6	0	10	3	3
g / C, Green / Cycle	0.26	0.26	0.01	0.46	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.14	0.15	0.00	0.12	0.06	0.06
s, saturation flow rate [veh/h]	1676	1591	1597	3192	1597	1538
c, Capacity [veh/h]	447	424	16	1484	254	244
d1, Uniform Delay [s]	6.67	6.73	10.46	3.44	7.97	7.98
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.00	1.18	13.74	0.09	0.84	0.89
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.53	0.56	0.37	0.25	0.35	0.36
d, Delay for Lane Group [s/veh]	7.66	7.91	24.19	3.53	8.81	8.87
Lane Group LOS	A	A	C	A	A	A
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	0.46	0.48	0.08	0.02	0.23	0.23
50th-Percentile Queue Length [ft]	11.43	11.89	1.90	0.45	5.83	5.77
95th-Percentile Queue Length [veh]	0.82	0.86	0.14	0.03	0.42	0.42
95th-Percentile Queue Length [ft]	20.58	21.39	3.43	0.80	10.50	10.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.76	7.91	24.19	3.53	8.83	8.87
Movement LOS	A	A	C	A	A	A
d_A, Approach Delay [s/veh]	7.78		3.86		8.84	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.54					
Intersection LOS	A					
Intersection V/C	0.876					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 1: US 101 S Ramps/Dry Creek Rd

Control Type:	Signalized	Delay (sec / veh):	24.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.688

Intersection Setup

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	1	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	250.00	100.00	100.00
Speed [mph]	30.00			55.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	0	0	0	133	1	38	0	245	189	854	222	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	133	1	38	0	245	189	854	222	0
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]	0	0	0	33	0	10	0	61	47	214	56	0
Total Analysis Volume [veh/h]	0	0	0	133	1	38	0	245	189	854	222	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	5	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	9	0	0	9	0	42	51	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	R	C	R	L	C
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		5	5	12	12	31	47
g / C, Green / Cycle		0.08	0.08	0.20	0.20	0.52	0.78
(v / s)_i Volume / Saturation Flow Rate		0.08	0.02	0.13	0.12	0.48	0.12
s, saturation flow rate [veh/h]		1775	1583	1863	1583	1774	1863
c, Capacity [veh/h]		153	136	370	314	916	1455
d1, Uniform Delay [s]		27.25	25.81	22.31	22.00	13.60	1.64
k, delay calibration		0.11	0.11	0.50	0.50	0.29	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		14.38	1.10	9.01	8.25	11.43	0.22
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.88	0.28	0.66	0.60	0.93	0.15
d, Delay for Lane Group [s/veh]		41.63	26.91	31.32	30.25	25.03	1.86
Lane Group LOS		D	C	C	C	C	A
Critical Lane Group		Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		2.24	0.48	3.70	2.83	11.45	0.28
50th-Percentile Queue Length [ft]		56.12	12.02	92.43	70.72	286.35	7.00
95th-Percentile Queue Length [veh]		4.04	0.87	6.65	5.09	17.00	0.50
95th-Percentile Queue Length [ft]		101.01	21.63	166.37	127.29	425.12	12.60

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	41.63	41.63	26.91	0.00	31.32	30.25	25.03	1.86	0.00
Movement LOS				D	D	C		C	C	C	A	
d_A, Approach Delay [s/veh]	0.00			38.38			30.85			20.25		
Approach LOS	A			D			C			C		
d_I, Intersection Delay [s/veh]	24.84											
Intersection LOS	C											
Intersection V/C	0.688											

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 2: US 101 N Ramps/Dry Creek Rd

Control Type:	Signalized	Delay (sec / veh):	43.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.863

Intersection Setup

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek 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	1	0	0	0	1	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]	55.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek Road		
Base Volume Input [veh/h]	68	0	708	0	0	0	14	359	0	0	995	280
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	200	0	0	0	0	0	0	0	0	100
Total Hourly Volume [veh/h]	68	0	508	0	0	0	14	359	0	0	995	180
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]	17	0	127	0	0	0	4	90	0	0	249	45
Total Analysis Volume [veh/h]	68	0	508	0	0	0	14	359	0	0	995	180
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	4	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	5	0	0	0	5	5	0	0	5	0
Maximum Green [s]	0	30	30	0	0	0	30	30	0	0	30	0
Amber [s]	0.0	3.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	44	67	0	0	0	9	76	0	0	67	0
Vehicle Extension [s]	0.0	3.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R		L	C	C	R
C, Cycle Length [s]	120	120		120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	40	40		2	72	66	66
g / C, Green / Cycle	0.33	0.33		0.02	0.60	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.04	0.32		0.01	0.19	0.53	0.11
s, saturation flow rate [veh/h]	1774	1583		1774	1863	1863	1583
c, Capacity [veh/h]	589	526		29	1120	1027	873
d1, Uniform Delay [s]	27.83	39.40		58.47	11.81	25.88	13.60
k, delay calibration	0.11	0.43		0.11	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.09	29.22		11.78	0.76	21.43	0.53
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

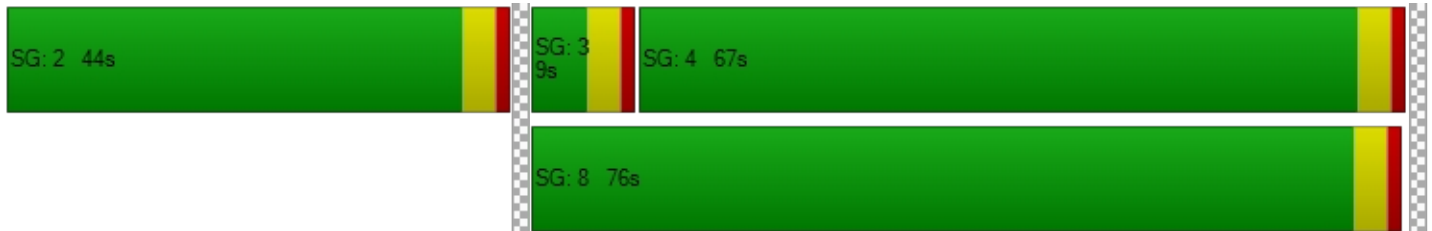
X, volume / capacity	0.12	0.97		0.48	0.32	0.97	0.21
d, Delay for Lane Group [s/veh]	27.91	68.62		70.25	12.56	47.31	14.14
Lane Group LOS	C	E		E	B	D	B
Critical Lane Group	No	Yes		Yes	No	Yes	No
50th-Percentile Queue Length [veh]	1.30	17.90		0.52	4.86	31.85	2.58
50th-Percentile Queue Length [ft]	32.59	447.61		12.93	121.58	796.33	64.42
95th-Percentile Queue Length [veh]	2.35	24.84		0.93	8.48	41.11	4.64
95th-Percentile Queue Length [ft]	58.65	621.09		23.28	212.00	1027.73	115.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.91	27.91	68.62	0.00	0.00	0.00	70.25	12.56	0.00	0.00	47.31	14.14
Movement LOS	C	C	E				E	B			D	B
d_A, Approach Delay [s/veh]	63.82			0.00			14.73			42.23		
Approach LOS	E			A			B			D		
d_I, Intersection Delay [s/veh]	43.25											
Intersection LOS	D											
Intersection V/C	0.863											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 3: Dry Creek Rd/Grove St

Control Type: Signalized
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 46.5
 Level Of Service: D
 Volume to Capacity (v/c): 0.838

Intersection Setup

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
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	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	265.00	75.00	100.00	75.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	184	94	128	37	108	318	233	700	138	86	768	49
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	59	0	0	100	0	0	28	0	0	10
Total Hourly Volume [veh/h]	184	94	69	37	108	218	233	700	110	86	768	39
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]	46	24	17	9	27	55	58	175	28	22	192	10
Total Analysis Volume [veh/h]	184	94	69	37	108	218	233	700	110	86	768	39
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	4			0			0			4		
Bicycle Volume [bicycles/h]	4			1			3			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	19	56	0	0	37	0	29	53	0	11	35	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No			No		No	No		No	No	
Maximum Recall	No	No			No		No	No		No	No	
Pedestrian Recall	No	No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15	51	32	19	49	49	8	38	38
g / C, Green / Cycle	0.13	0.42	0.26	0.16	0.41	0.41	0.07	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.12	0.11	0.25	0.15	0.25	0.25	0.05	0.24	0.24
s, saturation flow rate [veh/h]	1597	1548	1450	1597	1676	1584	1597	1676	1648
c, Capacity [veh/h]	200	654	417	259	691	652	104	528	519
d1, Uniform Delay [s]	51.92	22.34	43.15	49.31	27.57	27.65	55.41	37.19	37.19
k, delay calibration	0.11	0.11	0.39	0.15	0.50	0.50	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	15.84	0.20	17.47	13.82	3.84	4.14	14.84	10.41	10.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.92	0.25	0.87	0.90	0.60	0.61	0.83	0.77	0.77
d, Delay for Lane Group [s/veh]	67.76	22.54	60.62	63.13	31.41	31.80	70.25	47.60	47.76
Lane Group LOS	E	C	E	E	C	C	E	D	D
Critical Lane Group	Yes	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	6.34	3.02	12.39	7.83	9.94	9.56	3.00	12.24	12.06
50th-Percentile Queue Length [ft]	158.61	75.47	309.64	195.65	248.57	238.89	74.97	305.97	301.44
95th-Percentile Queue Length [veh]	10.48	5.43	18.16	12.41	15.11	14.63	5.40	17.98	17.75
95th-Percentile Queue Length [ft]	261.88	135.84	453.93	310.34	377.85	365.63	134.94	449.40	443.81

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	67.76	22.54	22.54	60.62	60.62	60.62	63.13	31.57	31.80	70.25	47.68	47.76
Movement LOS	E	C	C	E	E	E	E	C	C	E	D	D
d_A, Approach Delay [s/veh]	46.52			60.62			38.64			49.85		
Approach LOS	D			E			D			D		
d_I, Intersection Delay [s/veh]	46.47											
Intersection LOS	D											
Intersection V/C	0.838											

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 4: Dry Creek Rd-March Ave/Healdsburg Ave

Control Type:	Signalized	Delay (sec / veh):	35.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.770

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	165.00	100.00	100.00	90.00	100.00	100.00	115.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	275	352	59	79	424	302	299	197	255	57	263	43
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	12	0	0	53	0	0	82	0	0	15
Total Hourly Volume [veh/h]	275	352	47	79	424	249	299	197	173	57	263	28
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]	69	88	12	20	106	62	75	49	43	14	66	7
Total Analysis Volume [veh/h]	275	352	47	79	424	249	299	197	173	57	263	28
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	4			2			7			2		
Bicycle Volume [bicycles/h]	1			2			1			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	23	19	0	23	19	0	0	19	0	0	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	16	33	33	5	23	23	15	15	15	11	11
g / C, Green / Cycle	0.20	0.41	0.41	0.06	0.28	0.28	0.18	0.18	0.18	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.17	0.12	0.12	0.05	0.21	0.22	0.15	0.15	0.12	0.11	0.11
s, saturation flow rate [veh/h]	1597	1676	1598	1597	1676	1446	1597	1658	1397	1651	1480
c, Capacity [veh/h]	314	693	661	102	471	406	293	305	257	230	206
d1, Uniform Delay [s]	31.26	15.69	15.71	36.98	26.37	26.54	31.54	31.51	30.49	33.42	33.45
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.65	1.07	1.14	11.75	10.95	13.62	6.04	5.68	3.06	6.19	7.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.88	0.29	0.30	0.77	0.76	0.78	0.83	0.83	0.67	0.80	0.80
d, Delay for Lane Group [s/veh]	38.91	16.76	16.86	48.73	37.32	40.16	37.58	37.19	33.56	39.61	40.50
Lane Group LOS	D	B	B	D	D	D	D	D	C	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh]	5.65	2.55	2.47	1.81	7.28	6.73	4.89	5.02	3.23	3.75	3.43
50th-Percentile Queue Length [ft]	141.34	63.78	61.77	45.18	181.89	168.31	122.27	125.53	80.86	93.64	85.75
95th-Percentile Queue Length [veh]	9.55	4.59	4.45	3.25	11.70	10.99	8.52	8.70	5.82	6.74	6.17
95th-Percentile Queue Length [ft]	238.83	114.81	111.19	81.33	292.48	274.69	212.94	217.40	145.55	168.55	154.35

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.91	16.80	16.86	48.73	37.77	40.16	37.51	37.19	33.56	39.61	40.08	40.50
Movement LOS	D	B	B	D	D	D	D	D	C	D	D	D
d_A, Approach Delay [s/veh]	25.83			39.71			36.39			40.03		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	35.02											
Intersection LOS	D											
Intersection V/C	0.770											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 5: Healdsburg Ave/Grove St

Control Type: Signalized
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 10.7
 Level Of Service: B
 Volume to Capacity (v/c): 0.322

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Grove St			Private Dwy		
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	1	0	0	1	0	0	1	0	1	0	0	0
Pocket Length [ft]	150.00	100.00	100.00	80.00	100.00	100.00	135.00	100.00	70.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Grove St			Private Dwy		
Base Volume Input [veh/h]	59	488	3	0	567	144	158	1	73	3	0	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	18	0	0	36	0	0	0
Total Hourly Volume [veh/h]	59	488	3	0	567	126	158	1	37	3	0	0
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]	15	122	1	0	142	32	40	0	9	1	0	0
Total Analysis Volume [veh/h]	59	488	3	0	567	126	158	1	37	3	0	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	1			0			0			3		
Bicycle Volume [bicycles/h]	2			3			1			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	3	6	0	3	6	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	15	30	0	0	20	0	0	15	0
Amber [s]	3.0	3.7	0.0	3.0	3.7	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	1.0	0.0
Split [s]	21	35	0	6	20	0	0	19	0	0	20	0
Vehicle Extension [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	2.1	0.0	1.0	2.1	0.0	0.0	1.6	0.0	0.0	2.2	0.0
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	3.00	4.10	4.10	3.00	4.10	4.10	3.60	3.60	3.60	4.20
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	2.10	2.10	1.00	2.10	2.10	1.60	1.60	1.60	2.20
g_i, Effective Green Time [s]	3	59	59	0	56	56	5	5	5	0
g / C, Green / Cycle	0.04	0.74	0.74	0.00	0.70	0.70	0.07	0.07	0.07	0.00
(v / s)_i Volume / Saturation Flow Rate	0.03	0.13	0.13	0.00	0.19	0.19	0.04	0.04	0.02	0.00
s, saturation flow rate [veh/h]	1774	1863	1858	1774	1863	1731	1774	1775	1553	1774
c, Capacity [veh/h]	78	1377	1374	1	1297	1206	123	123	107	8
d1, Uniform Delay [s]	37.88	3.13	3.13	0.00	4.57	4.58	36.34	36.34	35.56	39.74
k, delay calibration	0.04	0.50	0.50	0.04	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.55	0.28	0.28	0.00	0.53	0.58	2.14	2.14	0.71	9.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

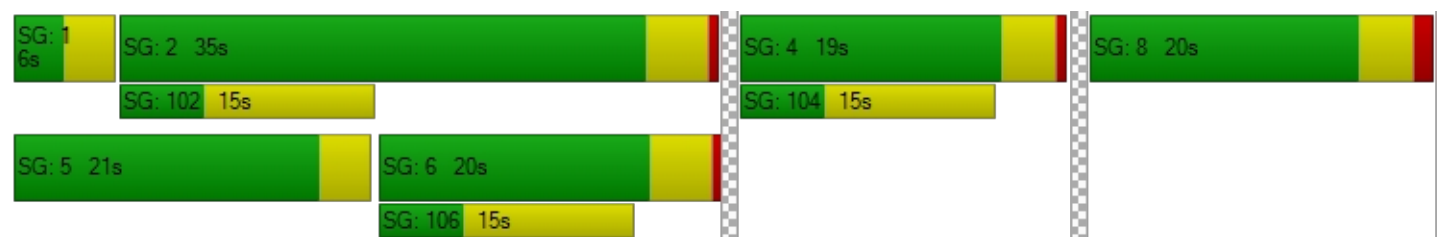
X, volume / capacity	0.76	0.18	0.18	0.00	0.27	0.28	0.65	0.65	0.35	0.35
d, Delay for Lane Group [s/veh]	43.43	3.42	3.42	0.00	5.09	5.16	38.49	38.48	36.27	48.76
Lane Group LOS	D	A	A	A	A	A	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	1.23	0.86	0.86	0.00	1.78	1.70	1.54	1.54	0.69	0.08
50th-Percentile Queue Length [ft]	30.72	21.54	21.52	0.00	44.57	42.52	38.44	38.45	17.20	1.99
95th-Percentile Queue Length [veh]	2.21	1.55	1.55	0.00	3.21	3.06	2.77	2.77	1.24	0.14
95th-Percentile Queue Length [ft]	55.29	38.78	38.73	0.00	80.23	76.53	69.19	69.21	30.97	3.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	43.43	3.42	3.42	0.00	5.12	5.16	38.48	38.48	36.27	48.76	48.76	48.76
Movement LOS	D	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	7.71			5.13			38.07			48.76		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	10.68											
Intersection LOS	B											
Intersection V/C	0.322											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Healdsburg Ave/Parkland Farms Blvd

Control Type:	Signalized	Delay (sec / veh):	6.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.847

Intersection Setup

Name	Healdsburg Ave		Healdsburg Ave		Parkland Farms Blvd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	1	0
Pocket Length [ft]	100.00	100.00	150.00	100.00	50.00	100.00
Speed [mph]	35.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Healdsburg Ave		Healdsburg Ave		Parkland Farms Blvd	
Base Volume Input [veh/h]	503	149	56	630	90	21
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	6	0	0	0	12
Total Hourly Volume [veh/h]	503	143	56	630	90	9
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]	126	36	14	158	23	2
Total Analysis Volume [veh/h]	503	143	56	630	90	9
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	1		3		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	49	0	11	60	20	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	24	24	24	24	24	24
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	8	2	13	2	2
g / C, Green / Cycle	0.33	0.33	0.07	0.56	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.19	0.21	0.04	0.20	0.03	0.03
s, saturation flow rate [veh/h]	1676	1539	1597	3192	1597	1562
c, Capacity [veh/h]	548	503	107	1792	165	161
d1, Uniform Delay [s]	6.69	6.84	10.76	2.86	9.90	9.91
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.01	1.37	3.96	0.12	1.02	1.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.59	0.64	0.53	0.35	0.30	0.31
d, Delay for Lane Group [s/veh]	7.70	8.21	14.72	2.97	10.92	10.97
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	0.69	0.74	0.28	0.03	0.19	0.19
50th-Percentile Queue Length [ft]	17.20	18.44	7.03	0.73	4.77	4.76
95th-Percentile Queue Length [veh]	1.24	1.33	0.51	0.05	0.34	0.34
95th-Percentile Queue Length [ft]	30.96	33.19	12.65	1.32	8.58	8.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.88	8.21	14.72	2.97	10.94	10.97
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	7.96		3.93		10.94	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	6.23					
Intersection LOS	A					
Intersection V/C	0.847					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 1: US 101 S Ramps/Dry Creek Rd

Control Type:	Signalized	Delay (sec / veh):	18.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.538

Intersection Setup

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	250.00	100.00	100.00
Speed [mph]	30.00			55.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	0	0	0	108	0	24	0	181	151	602	258	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	9	0	63	8	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	108	0	24	0	190	151	665	266	0
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]	0	0	0	27	0	6	0	48	38	166	67	0
Total Analysis Volume [veh/h]	0	0	0	108	0	24	0	190	151	665	266	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	5	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	42	0	0	9	0	9	18	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	R	C	R	L	C
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		5	5	18	18	25	47
g / C, Green / Cycle		0.09	0.09	0.30	0.30	0.41	0.78
(v / s)_i Volume / Saturation Flow Rate		0.06	0.02	0.10	0.10	0.37	0.14
s, saturation flow rate [veh/h]		1774	1583	1863	1583	1774	1863
c, Capacity [veh/h]		157	140	554	471	736	1450
d1, Uniform Delay [s]		26.62	25.38	16.53	16.41	16.49	1.72
k, delay calibration		0.11	0.11	0.50	0.50	0.16	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		5.27	0.57	1.69	1.79	6.53	0.28
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.69	0.17	0.34	0.32	0.90	0.18
d, Delay for Lane Group [s/veh]		31.89	25.95	18.22	18.21	23.02	2.00
Lane Group LOS		C	C	B	B	C	A
Critical Lane Group		Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		1.52	0.30	1.98	1.59	8.67	0.36
50th-Percentile Queue Length [ft]		37.97	7.39	49.53	39.82	216.76	8.99
95th-Percentile Queue Length [veh]		2.73	0.53	3.57	2.87	13.50	0.65
95th-Percentile Queue Length [ft]		68.35	13.30	89.15	71.68	337.49	16.19

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	31.89	31.89	25.95	0.00	18.22	18.21	23.02	2.00	0.00
Movement LOS				C	C	C		B	B	C	A	
d_A, Approach Delay [s/veh]	0.00			30.81			18.21			17.01		
Approach LOS	A			C			B			B		
d_I, Intersection Delay [s/veh]	18.60											
Intersection LOS	B											
Intersection V/C	0.538											

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 2: US 101 N Ramps/Dry Creek Rd

Control Type:	Signalized	Delay (sec / veh):	21.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.667

Intersection Setup

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek 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	1	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek Road		
Base Volume Input [veh/h]	129	2	826	0	0	0	8	280	0	0	708	138
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	63	0	0	0	0	9	0	0	71	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
Right-Turn on Red Volume [veh/h]	0	0	250	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	129	2	639	0	0	0	8	289	0	0	779	138
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	1	160	0	0	0	2	72	0	0	195	35
Total Analysis Volume [veh/h]	129	2	639	0	0	0	8	289	0	0	779	138
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	5	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	30	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	42	0	0	0	0	9	18	0	0	9	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R		L	C	C	C
C, Cycle Length [s]	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	27	27		1	25	21	21
g / C, Green / Cycle	0.44	0.44		0.01	0.42	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.07	0.40		0.00	0.16	0.25	0.26
s, saturation flow rate [veh/h]	1775	1583		1774	1863	1863	1769
c, Capacity [veh/h]	790	705		22	786	639	607
d1, Uniform Delay [s]	10.00	15.53		29.47	11.90	17.22	17.53
k, delay calibration	0.11	0.19		0.11	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.10	8.01		9.64	1.33	6.79	8.52
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

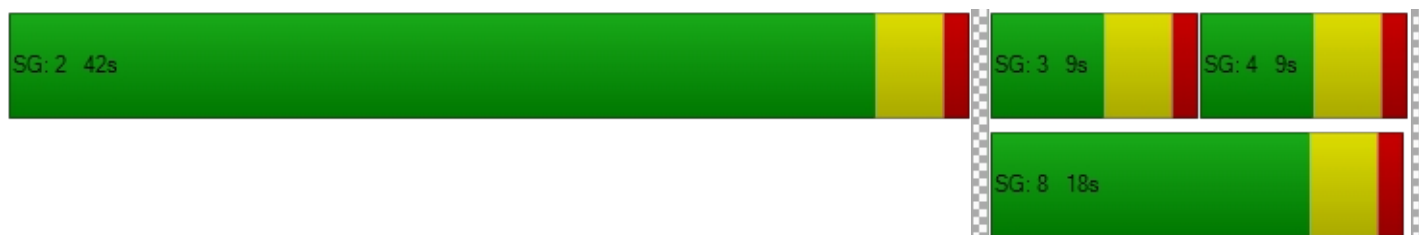
X, volume / capacity	0.17	0.91		0.36	0.37	0.72	0.76
d, Delay for Lane Group [s/veh]	10.10	23.55		39.11	13.22	24.02	26.04
Lane Group LOS	B	C		D	B	C	C
Critical Lane Group	No	Yes		Yes	No	No	Yes
50th-Percentile Queue Length [veh]	0.76	7.20		0.17	2.60	6.11	6.42
50th-Percentile Queue Length [ft]	19.11	179.92		4.22	64.99	152.63	160.52
95th-Percentile Queue Length [veh]	1.38	11.60		0.30	4.68	10.16	10.58
95th-Percentile Queue Length [ft]	34.40	289.91		7.59	116.97	253.93	264.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	10.10	10.10	23.55	0.00	0.00	0.00	39.11	13.22	0.00	0.00	24.85	26.04
Movement LOS	B	B	C				D	B			C	C
d_A, Approach Delay [s/veh]	21.26			0.00			13.92			25.03		
Approach LOS	C			A			B			C		
d_I, Intersection Delay [s/veh]	21.90											
Intersection LOS	C											
Intersection V/C	0.667											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Dry Creek Rd/Grove StControl Type: Signalized
Analysis Method: HCM 2010
Analysis Period: 15 minutesDelay (sec / veh): 28.0
Level Of Service: C
Volume to Capacity (v/c): 0.782**Intersection Setup**

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
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	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	125.00	100.00	265.00	75.00	100.00	75.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	100	58	53	36	88	195	210	711	145	70	539	56
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	8	0	0	12	71	72	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
Right-Turn on Red Volume [veh/h]	0	0	14	0	0	67	0	0	27	0	0	3
Total Hourly Volume [veh/h]	100	66	39	36	100	199	282	711	118	70	539	53
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]	25	17	10	9	25	50	71	178	30	18	135	13
Total Analysis Volume [veh/h]	100	66	39	36	100	199	282	711	118	70	539	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	2			0			0			3		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	29	0	0	19	0	20	19	0	22	21	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No			No		No	No		No	No	
Maximum Recall	No	No			No		No	No		No	No	
Pedestrian Recall	No	No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	25	16	14	29	29	4	19	19
g / C, Green / Cycle	0.08	0.36	0.22	0.20	0.42	0.42	0.05	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.06	0.07	0.23	0.18	0.25	0.25	0.04	0.18	0.18
s, saturation flow rate [veh/h]	1597	1572	1469	1597	1676	1593	1597	1676	1617
c, Capacity [veh/h]	124	559	381	322	702	667	87	455	439
d1, Uniform Delay [s]	31.78	15.59	27.45	27.10	15.85	15.86	32.73	22.63	22.67
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.67	0.16	6.57	7.50	3.85	4.06	15.55	7.31	7.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

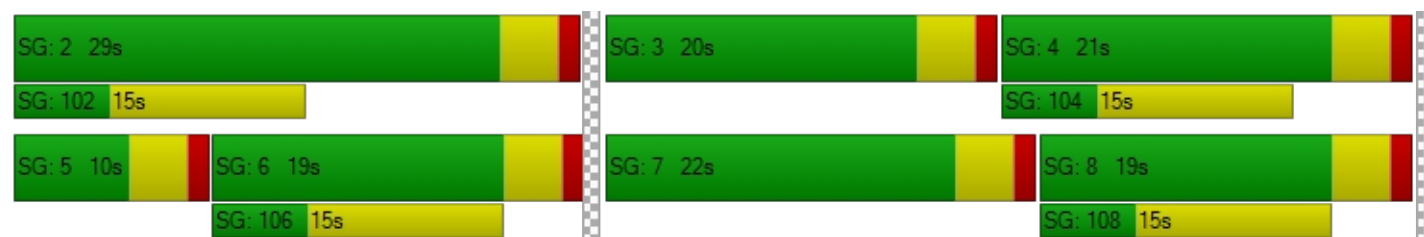
X, volume / capacity	0.81	0.19	0.88	0.88	0.61	0.61	0.80	0.66	0.66
d, Delay for Lane Group [s/veh]	43.45	15.75	34.03	34.60	19.69	19.92	48.27	29.94	30.40
Lane Group LOS	D	B	C	C	B	B	D	C	C
Critical Lane Group	Yes	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	2.01	1.11	5.91	5.00	5.55	5.32	1.51	5.05	4.96
50th-Percentile Queue Length [ft]	50.19	27.73	147.77	125.04	138.70	133.06	37.78	126.36	124.10
95th-Percentile Queue Length [veh]	3.61	2.00	9.90	8.67	9.41	9.11	2.72	8.74	8.62
95th-Percentile Queue Length [ft]	90.34	49.91	247.46	216.74	235.27	227.65	68.00	218.54	215.44

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	43.45	15.75	15.75	34.03	34.03	34.03	34.60	19.78	19.92	48.27	30.15	30.40
Movement LOS	D	B	B	C	C	C	C	B	B	D	C	C
d_A, Approach Delay [s/veh]	29.26			34.03			23.56			32.08		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	28.02											
Intersection LOS	C											
Intersection V/C	0.782											

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Dry Creek Rd/Grove St

Control Type: Signalized
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 24.0
 Level Of Service: C
 Volume to Capacity (v/c): 0.699

Intersection Setup

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
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	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	125.00	100.00	265.00	75.00	100.00	75.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	100	58	53	36	88	195	210	711	145	70	539	56
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	8	0	0	12	71	72	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
Right-Turn on Red Volume [veh/h]	0	0	14	0	0	67	0	0	27	0	0	3
Total Hourly Volume [veh/h]	100	66	39	36	100	199	282	711	118	70	539	53
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]	25	17	10	9	25	50	71	178	30	18	135	13
Total Analysis Volume [veh/h]	100	66	39	36	100	199	282	711	118	70	539	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	2			0			0			3		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	28	0	0	19	0	13	19	0	13	19	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No			No		No	No		No	No	
Maximum Recall	No	No			No		No	No		No	No	
Pedestrian Recall	No	No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	19	10	10	12	25	25	3	17	17
g / C, Green / Cycle	0.08	0.32	0.17	0.17	0.21	0.42	0.42	0.06	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.06	0.07	0.10	0.14	0.18	0.25	0.25	0.04	0.18	0.18
s, saturation flow rate [veh/h]	1597	1572	1368	1425	1597	1676	1593	1597	1676	1617
c, Capacity [veh/h]	125	502	314	249	329	709	673	93	461	445
d1, Uniform Delay [s]	27.24	14.92	22.54	23.82	23.04	13.42	13.43	27.89	19.24	19.27
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.90	0.20	0.94	5.89	6.51	3.72	3.93	11.49	6.95	7.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.21	0.43	0.80	0.86	0.60	0.60	0.75	0.65	0.66
d, Delay for Lane Group [s/veh]	38.14	15.13	23.48	29.72	29.55	17.15	17.36	39.38	26.20	26.62
Lane Group LOS	D	B	C	C	C	B	B	D	C	C
Critical Lane Group	Yes	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.71	0.98	1.66	2.87	4.15	4.56	4.38	1.24	4.25	4.18
50th-Percentile Queue Length [ft]	42.84	24.58	41.53	71.87	103.75	114.05	109.57	30.92	106.28	104.50
95th-Percentile Queue Length [veh]	3.08	1.77	2.99	5.17	7.47	8.06	7.82	2.23	7.63	7.52
95th-Percentile Queue Length [ft]	77.11	44.25	74.76	129.37	186.75	201.62	195.40	55.66	190.82	188.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.14	15.13	15.13	23.48	23.48	29.72	29.55	17.23	17.36	39.38	26.38	26.62
Movement LOS	D	B	B	C	C	C	C	B	B	D	C	C
d_A, Approach Delay [s/veh]	26.35			27.19			20.37			27.78		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	24.01											
Intersection LOS	C											
Intersection V/C	0.699											

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 4: Dry Creek Rd-March Ave/Healdsburg Ave

Control Type:	Signalized	Delay (sec / veh):	50.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.668

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	165.00	100.00	100.00	90.00	100.00	100.00	115.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	255	281	36	62	265	177	235	274	207	64	199	41
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	20	0	13	16	0	0	0	0	0	0	10
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
Right-Turn on Red Volume [veh/h]	0	0	16	0	0	46	0	0	91	0	0	12
Total Hourly Volume [veh/h]	255	301	20	75	281	131	235	274	116	64	199	39
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]	64	75	5	19	70	33	59	69	29	16	50	10
Total Analysis Volume [veh/h]	255	301	20	75	281	131	235	274	116	64	199	39
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	6			6			5			1		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	22	0	9	19	0	0	19	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	27	27	4	23	23	14	14	14	9	9
g / C, Green / Cycle	0.11	0.38	0.38	0.06	0.32	0.32	0.20	0.20	0.20	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.16	0.10	0.10	0.05	0.13	0.13	0.15	0.16	0.08	0.10	0.10
s, saturation flow rate [veh/h]	1597	1676	1640	1597	1676	1496	1597	1676	1412	1643	1443
c, Capacity [veh/h]	184	634	620	96	542	483	323	339	286	217	190
d1, Uniform Delay [s]	31.09	15.03	15.04	32.58	18.46	18.55	26.21	26.72	24.35	29.32	29.39
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	181.74	0.97	1.00	13.09	2.17	2.55	3.13	4.58	0.93	4.78	5.85
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

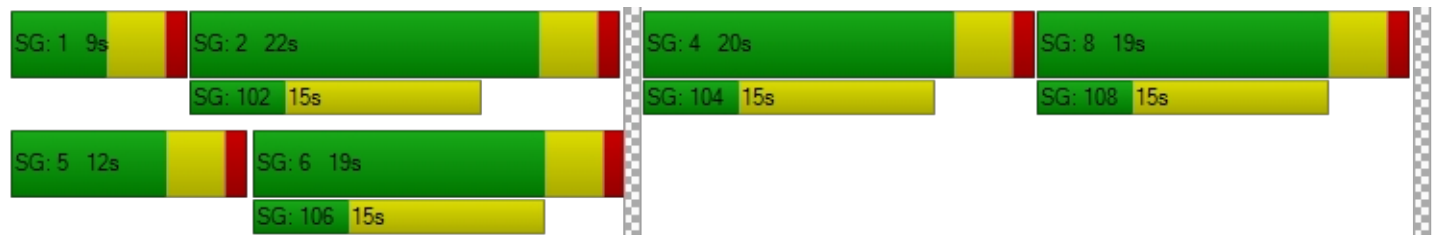
X, volume / capacity	1.39	0.26	0.26	0.78	0.40	0.41	0.73	0.81	0.41	0.73	0.75
d, Delay for Lane Group [s/veh]	212.83	16.00	16.03	45.67	20.63	21.09	29.34	31.30	25.28	34.10	35.23
Lane Group LOS	F	B	B	D	C	C	C	C	C	C	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	12.26	1.82	1.79	1.55	2.80	2.63	3.77	4.58	1.67	2.76	2.54
50th-Percentile Queue Length [ft]	306.47	45.45	44.74	38.64	69.99	65.65	94.28	114.48	41.85	69.10	63.38
95th-Percentile Queue Length [veh]	20.19	3.27	3.22	2.78	5.04	4.73	6.79	8.09	3.01	4.98	4.56
95th-Percentile Queue Length [ft]	504.69	81.81	80.53	69.55	125.99	118.17	169.70	202.22	75.34	124.38	114.08

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	212.83	16.02	16.03	45.67	20.74	21.09	29.34	31.30	25.28	34.10	34.69	35.23
Movement LOS	F	B	B	D	C	C	C	C	C	C	C	D
d_A, Approach Delay [s/veh]	103.15			24.67			29.45			34.64		
Approach LOS	F			C			C			C		
d_I, Intersection Delay [s/veh]	50.40											
Intersection LOS	D											
Intersection V/C	0.668											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 5: Healdsburg Ave/Grove St

Control Type: Signalized
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 10.2
 Level Of Service: B
 Volume to Capacity (v/c): 0.295

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Grove St			Private Dwy		
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	1	0	0	1	0	0	1	0	1	0	0	0
Pocket Length [ft]	150.00	100.00	100.00	80.00	100.00	100.00	135.00	100.00	70.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Grove St			Private Dwy		
Base Volume Input [veh/h]	39	403	2	0	361	166	63	0	53	2	2	1
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	30	0	0	29	84	88	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	13	0	0	29	0	0	1
Total Hourly Volume [veh/h]	39	433	2	0	390	237	151	0	24	2	2	0
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]	10	108	1	0	98	59	38	0	6	1	1	0
Total Analysis Volume [veh/h]	39	433	2	0	390	237	151	0	24	2	2	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			0			0			3		
Bicycle Volume [bicycles/h]	0			1			1			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	3	6	0	3	6	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	15	30	0	0	20	0	0	15	0
Amber [s]	3.0	3.7	0.0	3.0	3.7	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	1.0	0.0
Split [s]	21	35	0	6	20	0	0	19	0	0	20	0
Vehicle Extension [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	2.1	0.0	1.0	2.1	0.0	0.0	1.6	0.0	0.0	2.2	0.0
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	3.00	4.10	4.10	3.00	4.10	4.10	3.60	3.60	3.60	4.20
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	2.10	2.10	1.00	2.10	2.10	1.60	1.60	1.60	2.20
g_i, Effective Green Time [s]	2	59	59	0	57	57	5	5	5	0
g / C, Green / Cycle	0.03	0.74	0.74	0.00	0.71	0.71	0.07	0.07	0.07	0.01
(v / s)_i Volume / Saturation Flow Rate	0.02	0.12	0.12	0.00	0.18	0.18	0.04	0.04	0.02	0.00
s, saturation flow rate [veh/h]	1774	1863	1860	1774	1863	1604	1774	1774	1524	1817
c, Capacity [veh/h]	51	1380	1378	1	1328	1143	118	118	101	11
d1, Uniform Delay [s]	38.64	3.05	3.05	0.00	4.02	4.05	36.47	36.47	35.48	39.66
k, delay calibration	0.04	0.50	0.50	0.04	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.60	0.24	0.24	0.00	0.45	0.55	2.16	2.16	0.44	7.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

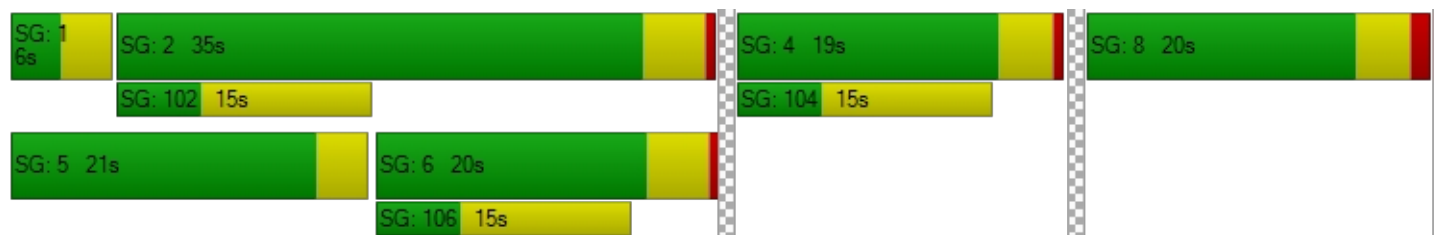
X, volume / capacity	0.77	0.16	0.16	0.00	0.25	0.26	0.64	0.64	0.24	0.36
d, Delay for Lane Group [s/veh]	47.24	3.29	3.29	0.00	4.47	4.59	38.63	38.63	35.92	46.90
Lane Group LOS	D	A	A	A	A	A	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	0.86	0.74	0.74	0.00	1.48	1.35	1.46	1.46	0.44	0.10
50th-Percentile Queue Length [ft]	21.49	18.54	18.52	0.00	36.89	33.68	36.58	36.58	11.08	2.50
95th-Percentile Queue Length [veh]	1.55	1.33	1.33	0.00	2.66	2.43	2.63	2.63	0.80	0.18
95th-Percentile Queue Length [ft]	38.68	33.37	33.34	0.00	66.40	60.63	65.84	65.84	19.94	4.51

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.24	3.29	3.29	0.00	4.49	4.59	38.63	38.63	35.92	46.90	46.90	46.90
Movement LOS	D	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	6.91			4.53			38.25			46.90		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	10.15											
Intersection LOS	B											
Intersection V/C	0.295											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 6: Healdsburg Ave/Parkland Farms Blvd

Control Type:	Signalized	Delay (sec / veh):	6.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.860

Intersection Setup

Name	Healdsburg Ave		Healdsburg Ave		Parkland Farms Blvd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	1	0
Pocket Length [ft]	100.00	100.00	150.00	100.00	50.00	100.00
Speed [mph]	35.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Healdsburg Ave		Healdsburg Ave		Parkland Farms Blvd	
Base Volume Input [veh/h]	405	79	6	368	150	40
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	118	0	1	113	0	2
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
Right-Turn on Red Volume [veh/h]	0	6	0	0	0	12
Total Hourly Volume [veh/h]	523	73	7	481	150	30
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]	131	18	2	120	38	8
Total Analysis Volume [veh/h]	523	73	7	481	150	30
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	49	0	11	60	20	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	22	22	22	22	22	22
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	7	0	11	3	3
g / C, Green / Cycle	0.30	0.30	0.01	0.49	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.18	0.19	0.00	0.15	0.06	0.06
s, saturation flow rate [veh/h]	1676	1607	1597	3192	1597	1534
c, Capacity [veh/h]	512	490	17	1573	245	235
d1, Uniform Delay [s]	6.63	6.70	11.11	3.42	8.59	8.60
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.06	1.22	15.62	0.11	0.94	1.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.58	0.61	0.42	0.31	0.37	0.38
d, Delay for Lane Group [s/veh]	7.69	7.92	26.73	3.53	9.53	9.60
Lane Group LOS	A	A	C	A	A	A
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	0.60	0.62	0.09	0.02	0.27	0.27
50th-Percentile Queue Length [ft]	14.95	15.46	2.32	0.59	6.87	6.79
95th-Percentile Queue Length [veh]	1.08	1.11	0.17	0.04	0.49	0.49
95th-Percentile Queue Length [ft]	26.90	27.83	4.18	1.07	12.37	12.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.79	7.92	26.73	3.53	9.56	9.60
Movement LOS	A	A	C	A	A	A
d_A, Approach Delay [s/veh]	7.80		3.86		9.57	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.53					
Intersection LOS	A					
Intersection V/C	0.860					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 7: Healdsburg Ave/Project Access

Control Type:	Signalized	Delay (sec / veh):	6.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.434

Intersection Setup

Name	Healdsburg Ave		Healdsburg Ave		Project Access Rd	
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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Healdsburg Ave		Healdsburg Ave		Project Access Rd	
Base Volume Input [veh/h]	0	444	374	0	0	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	120	0	0	9	16	114
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	120	444	374	9	16	114
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]	30	111	94	2	4	29
Total Analysis Volume [veh/h]	120	444	374	9	16	114
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Split	Split
Signal group	0	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	0	5	5	0	5	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.0	3.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	19	19	0	41	0
Vehicle Extension [s]	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C
C, Cycle Length [s]	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00
g_i, Effective Green Time [s]	46	46	6
g / C, Green / Cycle	0.76	0.76	0.11
(v / s)_i Volume / Saturation Flow Rate	0.35	0.21	0.08
s, saturation flow rate [veh/h]	1598	1855	1605
c, Capacity [veh/h]	1288	1411	171
d1, Uniform Delay [s]	2.48	2.17	26.10
k, delay calibration	0.50	0.50	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00
d2, Incremental Delay [s]	1.08	0.47	6.85
d3, Initial Queue Delay [s]	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.44	0.27	0.76
d, Delay for Lane Group [s/veh]	3.56	2.65	32.95
Lane Group LOS	A	A	C
Critical Lane Group	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.90	0.49	2.06
50th-Percentile Queue Length [ft]	22.62	12.37	51.48
95th-Percentile Queue Length [veh]	1.63	0.89	3.71
95th-Percentile Queue Length [ft]	40.72	22.26	92.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.56	3.56	2.65	2.65	32.95	32.95
Movement LOS	A	A	A	A	C	C
d_A, Approach Delay [s/veh]	3.56		2.65		32.95	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	6.78					
Intersection LOS	A					
Intersection V/C	0.434					

Sequence

Ring 1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 1: US 101 S Ramps/Dry Creek Rd

Control Type:	Signalized	Delay (sec / veh):	30.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.745

Intersection Setup

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	1	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	250.00	100.00	100.00
Speed [mph]	30.00			55.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	0	0	0	133	1	38	0	245	189	854	222	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	10	0	91	11	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	133	1	38	0	255	189	945	233	0
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]	0	0	0	33	0	10	0	64	47	236	58	0
Total Analysis Volume [veh/h]	0	0	0	133	1	38	0	255	189	945	233	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	5	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	9	0	0	9	0	42	51	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	R	C	R	L	C
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		5	5	9	9	34	47
g / C, Green / Cycle		0.08	0.08	0.15	0.15	0.56	0.78
(v / s)_i Volume / Saturation Flow Rate		0.08	0.02	0.14	0.12	0.53	0.13
s, saturation flow rate [veh/h]		1775	1583	1863	1583	1774	1863
c, Capacity [veh/h]		150	134	286	243	998	1457
d1, Uniform Delay [s]		27.26	25.82	24.97	24.48	12.33	1.63
k, delay calibration		0.11	0.11	0.50	0.50	0.35	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		15.97	1.14	31.47	21.33	14.13	0.23
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.89	0.28	0.89	0.78	0.95	0.16
d, Delay for Lane Group [s/veh]		43.23	26.96	56.44	45.80	26.46	1.86
Lane Group LOS		D	C	E	D	C	A
Critical Lane Group		Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		2.30	0.48	5.62	3.71	12.83	0.29
50th-Percentile Queue Length [ft]		57.50	12.03	140.55	92.70	320.72	7.31
95th-Percentile Queue Length [veh]		4.14	0.87	9.51	6.67	18.70	0.53
95th-Percentile Queue Length [ft]		103.50	21.65	237.77	166.86	467.57	13.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	43.23	43.23	26.96	0.00	56.44	45.80	26.46	1.86	0.00
Movement LOS				D	D	C		E	D	C	A	
d_A, Approach Delay [s/veh]	0.00			39.63			51.91			21.60		
Approach LOS	A			D			D			C		
d_I, Intersection Delay [s/veh]	30.83											
Intersection LOS	C											
Intersection V/C	0.745											

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 2: US 101 N Ramps/Dry Creek Rd

Control Type:	Signalized	Delay (sec / veh):	44.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.738

Intersection Setup

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek 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	1	0	0	0	1	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]	55.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek Road		
Base Volume Input [veh/h]	68	0	708	0	0	0	14	359	0	0	995	280
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	78	0	0	0	0	10	0	0	102	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
Right-Turn on Red Volume [veh/h]	0	0	200	0	0	0	0	0	0	0	0	100
Total Hourly Volume [veh/h]	68	0	586	0	0	0	14	369	0	0	1097	180
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]	17	0	147	0	0	0	4	92	0	0	274	45
Total Analysis Volume [veh/h]	68	0	586	0	0	0	14	369	0	0	1097	180
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	4	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	5	0	0	0	5	5	0	0	5	0
Maximum Green [s]	0	30	30	0	0	0	30	30	0	0	30	0
Amber [s]	0.0	3.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	44	67	0	0	0	9	76	0	0	67	0
Vehicle Extension [s]	0.0	3.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R		L	C	C	C
C, Cycle Length [s]	120	120		120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	40	40		2	72	66	66
g / C, Green / Cycle	0.33	0.33		0.02	0.60	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.04	0.37		0.01	0.20	0.34	0.36
s, saturation flow rate [veh/h]	1774	1583		1774	1863	1863	1774
c, Capacity [veh/h]	590	527		29	1119	1026	977
d1, Uniform Delay [s]	27.76	40.01		58.47	11.94	18.42	18.91
k, delay calibration	0.11	0.50		0.11	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.09	73.64		11.78	0.79	2.84	3.40
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

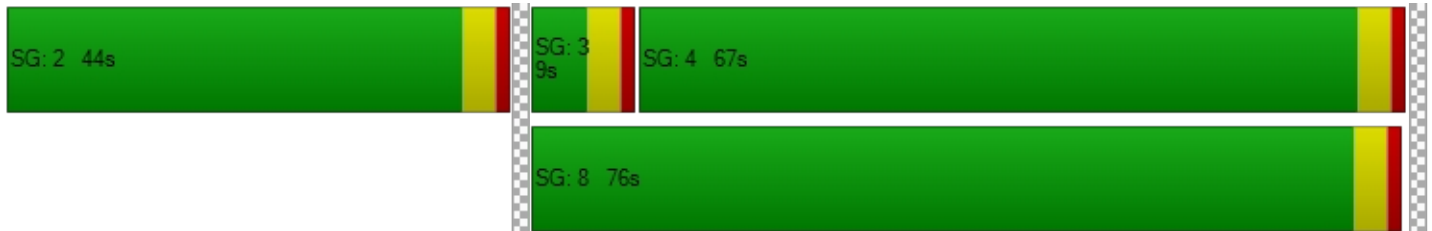
X, volume / capacity	0.12	1.11		0.48	0.33	0.62	0.65
d, Delay for Lane Group [s/veh]	27.84	113.65		70.25	12.73	21.26	22.31
Lane Group LOS	C	F		E	B	C	C
Critical Lane Group	No	Yes		Yes	No	No	Yes
50th-Percentile Queue Length [veh]	1.30	25.16		0.52	5.05	12.55	12.97
50th-Percentile Queue Length [ft]	32.53	628.91		12.93	126.21	313.67	324.28
95th-Percentile Queue Length [veh]	2.34	35.76		0.93	8.73	18.36	18.88
95th-Percentile Queue Length [ft]	58.56	893.90		23.28	218.33	458.90	471.95

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.84	27.84	113.65	0.00	0.00	0.00	70.25	12.73	0.00	0.00	21.70	22.31
Movement LOS	C	C	F				E	B			C	C
d_A, Approach Delay [s/veh]	104.73			0.00			14.83			21.78		
Approach LOS	F			A			B			C		
d_I, Intersection Delay [s/veh]	44.07											
Intersection LOS	D											
Intersection V/C	0.738											

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Dry Creek Rd/Grove StControl Type: Signalized
Analysis Method: HCM 2010
Analysis Period: 15 minutesDelay (sec / veh): 68.2
Level Of Service: E
Volume to Capacity (v/c): 0.993**Intersection Setup**

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
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	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	265.00	75.00	100.00	75.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	184	94	128	37	108	318	233	700	138	86	768	49
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	13	0	0	12	102	88	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
Right-Turn on Red Volume [veh/h]	0	0	59	0	0	100	0	0	28	0	0	10
Total Hourly Volume [veh/h]	184	107	69	37	120	320	321	700	110	86	768	39
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]	46	27	17	9	30	80	80	175	28	22	192	10
Total Analysis Volume [veh/h]	184	107	69	37	120	320	321	700	110	86	768	39
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	4			0			0			4		
Bicycle Volume [bicycles/h]	4			1			3			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	19	56	0	0	37	0	29	53	0	11	35	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No			No		No	No		No	No	
Maximum Recall	No	No			No		No	No		No	No	
Pedestrian Recall	No	No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15	52	33	25	49	49	7	31	31
g / C, Green / Cycle	0.13	0.43	0.27	0.21	0.41	0.41	0.06	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.12	0.11	0.33	0.20	0.25	0.25	0.05	0.24	0.24
s, saturation flow rate [veh/h]	1597	1557	1427	1597	1676	1584	1597	1676	1648
c, Capacity [veh/h]	200	674	424	336	682	644	96	430	423
d1, Uniform Delay [s]	51.92	21.75	44.74	46.83	28.04	28.14	56.01	43.77	43.77
k, delay calibration	0.11	0.11	0.50	0.31	0.50	0.50	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	15.84	0.20	82.20	28.99	4.00	4.33	23.03	31.65	32.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

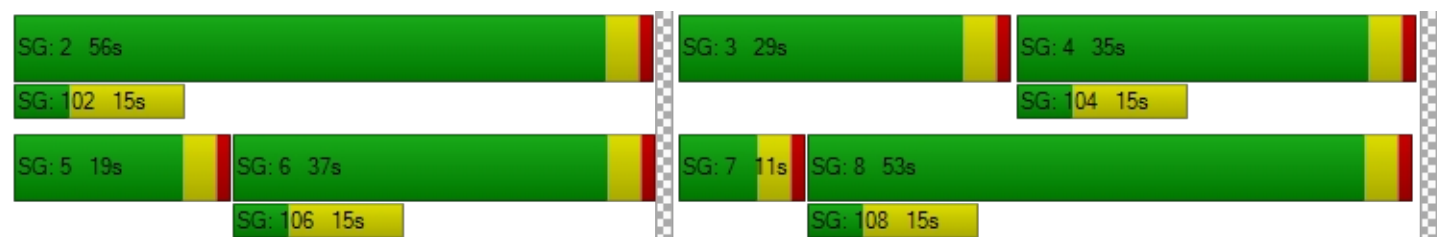
X, volume / capacity	0.92	0.26	1.12	0.96	0.61	0.61	0.89	0.95	0.95
d, Delay for Lane Group [s/veh]	67.76	21.96	126.94	75.83	32.04	32.47	79.04	75.42	75.78
Lane Group LOS	E	C	F	E	C	C	E	E	E
Critical Lane Group	Yes	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	6.34	3.22	22.40	12.13	10.04	9.67	3.20	15.54	15.32
50th-Percentile Queue Length [ft]	158.61	80.39	559.95	303.30	251.12	241.72	80.07	388.40	382.96
95th-Percentile Queue Length [veh]	10.48	5.79	32.34	17.84	15.24	14.77	5.76	22.00	21.74
95th-Percentile Queue Length [ft]	261.88	144.70	808.47	446.11	381.07	369.21	144.12	550.01	543.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	67.76	21.96	21.96	126.94	126.94	126.94	75.83	32.22	32.47	79.04	75.59	75.78
Movement LOS	E	C	C	F	F	F	E	C	C	E	E	E
d_A, Approach Delay [s/veh]	45.37			126.94			44.62			75.93		
Approach LOS	D			F			D			E		
d_I, Intersection Delay [s/veh]	68.21											
Intersection LOS	E											
Intersection V/C	0.993											

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Dry Creek Rd/Grove St

Control Type: Signalized
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 38.9
 Level Of Service: D
 Volume to Capacity (v/c): 0.813

Intersection Setup

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
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	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	265.00	75.00	100.00	75.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	184	94	128	37	108	318	233	700	138	86	768	49
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	13	0	0	12	102	88	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
Right-Turn on Red Volume [veh/h]	0	0	59	0	0	100	0	0	28	0	0	10
Total Hourly Volume [veh/h]	184	107	69	37	120	320	321	700	110	86	768	39
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]	46	27	17	9	30	80	80	175	28	22	192	10
Total Analysis Volume [veh/h]	184	107	69	37	120	320	321	700	110	86	768	39
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	4			0			0			4		
Bicycle Volume [bicycles/h]	4			1			3			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	0	6	3	3	8	0	7	4	0
Auxiliary Signal Groups						3,6						
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	0	5	5	5	5	0	5	5	0
Maximum Green [s]	30	30	0	0	30	30	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	19	56	0	0	37	29	29	53	0	11	35	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No			No	No	No	No		No	No	
Maximum Recall	No	No			No	No	No	No		No	No	
Pedestrian Recall	No	No			No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15	41	21	52	27	59	59	8	41	41
g / C, Green / Cycle	0.13	0.34	0.18	0.44	0.22	0.50	0.50	0.07	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.12	0.11	0.15	0.23	0.20	0.25	0.25	0.05	0.24	0.24
s, saturation flow rate [veh/h]	1597	1556	1069	1407	1597	1676	1585	1597	1676	1648
c, Capacity [veh/h]	201	526	228	615	359	829	784	108	565	556
d1, Uniform Delay [s]	51.87	29.69	47.56	24.65	45.16	20.37	20.44	55.20	34.83	34.83
k, delay calibration	0.11	0.11	0.11	0.26	0.20	0.50	0.50	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	15.06	0.37	3.87	1.64	13.09	2.15	2.31	12.49	7.70	7.83
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

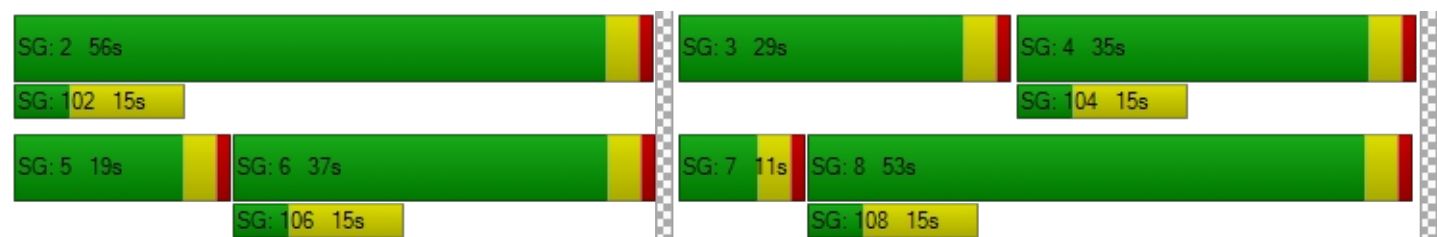
X, volume / capacity	0.92	0.33	0.69	0.52	0.89	0.50	0.50	0.80	0.72	0.72
d, Delay for Lane Group [s/veh]	66.93	30.07	51.42	26.29	58.25	22.52	22.75	67.69	42.53	42.66
Lane Group LOS	E	C	D	C	E	C	C	E	D	D
Critical Lane Group	Yes	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	6.31	3.87	4.80	6.77	10.54	8.17	7.86	2.94	11.52	11.35
50th-Percentile Queue Length [ft]	157.66	96.64	120.00	169.37	263.49	204.33	196.39	73.50	288.07	283.73
95th-Percentile Queue Length [veh]	10.42	6.96	8.39	11.04	15.86	12.86	12.45	5.29	17.09	16.87
95th-Percentile Queue Length [ft]	260.62	173.96	209.82	276.08	396.60	321.54	311.30	132.31	427.25	421.86

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	66.93	30.07	30.07	51.42	51.42	26.29	58.25	22.61	22.75	67.69	42.59	42.66
Movement LOS	E	C	C	D	D	C	E	C	C	E	D	D
d_A, Approach Delay [s/veh]	48.91			34.56			32.74			45.01		
Approach LOS	D			C			C			D		
d_I, Intersection Delay [s/veh]	38.91											
Intersection LOS	D											
Intersection V/C	0.813											

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 4: Dry Creek Rd-March Ave/Healdsburg Ave

Control Type:	Signalized	Delay (sec / veh):	36.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.788

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	165.00	100.00	100.00	90.00	100.00	100.00	115.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	275	352	59	79	424	302	299	197	255	57	263	43
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	0	17	30	0	0	0	0	0	0	17
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
Right-Turn on Red Volume [veh/h]	0	0	12	0	0	53	0	0	82	0	0	15
Total Hourly Volume [veh/h]	275	376	47	96	454	249	299	197	173	57	263	45
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]	69	94	12	24	114	62	75	49	43	14	66	11
Total Analysis Volume [veh/h]	275	376	47	96	454	249	299	197	173	57	263	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	4			2			7			2		
Bicycle Volume [bicycles/h]	1			2			1			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	23	19	0	23	19	0	0	19	0	0	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	16	32	32	6	22	22	15	15	15	12	12
g / C, Green / Cycle	0.20	0.40	0.40	0.08	0.28	0.28	0.18	0.18	0.18	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.17	0.13	0.13	0.06	0.22	0.23	0.15	0.15	0.12	0.12	0.12
s, saturation flow rate [veh/h]	1597	1676	1602	1597	1676	1455	1597	1658	1397	1652	1457
c, Capacity [veh/h]	314	662	632	123	461	400	292	303	256	241	212
d1, Uniform Delay [s]	31.26	16.86	16.89	36.33	27.10	27.26	31.60	31.57	30.56	33.15	33.20
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.65	1.31	1.39	10.01	14.11	17.34	6.22	5.84	3.12	6.11	7.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

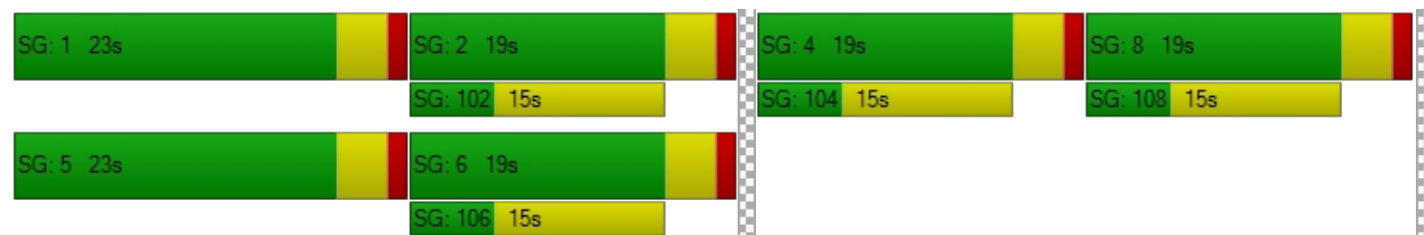
X, volume / capacity	0.88	0.33	0.33	0.78	0.81	0.82	0.84	0.83	0.68	0.80	0.81
d, Delay for Lane Group [s/veh]	38.91	18.17	18.27	46.34	41.21	44.59	37.82	37.42	33.68	39.25	40.49
Lane Group LOS	D	B	B	D	D	D	D	D	C	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh]	5.65	2.85	2.76	2.12	8.04	7.48	4.91	5.04	3.24	3.93	3.58
50th-Percentile Queue Length [ft]	141.34	71.24	69.10	53.12	200.93	186.98	122.69	125.94	81.02	98.30	89.54
95th-Percentile Queue Length [veh]	9.55	5.13	4.97	3.82	12.69	11.96	8.54	8.72	5.83	7.08	6.45
95th-Percentile Queue Length [ft]	238.83	128.23	124.37	95.61	317.17	299.11	213.52	217.97	145.84	176.95	161.18

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.91	18.22	18.27	46.34	41.81	44.59	37.75	37.42	33.68	39.25	39.85	40.49
Movement LOS	D	B	B	D	D	D	D	D	C	D	D	D
d_A, Approach Delay [s/veh]	26.37			43.22			36.60			39.83		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	36.34											
Intersection LOS	D											
Intersection V/C	0.788											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 5: Healdsburg Ave/Grove St

Control Type: Signalized
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 12.5
 Level Of Service: B
 Volume to Capacity (v/c): 0.418

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Grove St			Private Dwy		
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	1	0	0	1	0	0	1	0	1	0	0	0
Pocket Length [ft]	150.00	100.00	100.00	80.00	100.00	100.00	135.00	100.00	70.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Grove St			Private Dwy		
Base Volume Input [veh/h]	59	488	3	0	567	144	158	1	73	3	0	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	41	0	0	47	122	102	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	18	0	0	36	0	0	0
Total Hourly Volume [veh/h]	59	529	3	0	614	248	260	1	37	3	0	0
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]	15	132	1	0	154	62	65	0	9	1	0	0
Total Analysis Volume [veh/h]	59	529	3	0	614	248	260	1	37	3	0	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	1			0			0			3		
Bicycle Volume [bicycles/h]	2			3			1			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	3	6	0	3	6	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	15	30	0	0	20	0	0	15	0
Amber [s]	3.0	3.7	0.0	3.0	3.7	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	1.0	0.0
Split [s]	21	35	0	6	20	0	0	19	0	0	20	0
Vehicle Extension [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	2.1	0.0	1.0	2.1	0.0	0.0	1.6	0.0	0.0	2.2	0.0
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	3.00	4.10	4.10	3.00	4.10	4.10	3.60	3.60	3.60	4.20
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	2.10	2.10	1.00	2.10	2.10	1.60	1.60	1.60	2.20
g_i, Effective Green Time [s]	3	57	57	0	54	54	8	8	8	0
g / C, Green / Cycle	0.04	0.71	0.71	0.00	0.67	0.67	0.10	0.10	0.10	0.00
(v / s)_i Volume / Saturation Flow Rate	0.03	0.14	0.14	0.00	0.24	0.25	0.07	0.07	0.02	0.00
s, saturation flow rate [veh/h]	1774	1863	1858	1774	1863	1659	1774	1775	1556	1774
c, Capacity [veh/h]	78	1324	1321	1	1243	1107	174	174	152	8
d1, Uniform Delay [s]	37.88	3.92	3.92	0.00	5.85	5.88	35.18	35.18	33.39	39.74
k, delay calibration	0.04	0.50	0.50	0.04	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.55	0.34	0.34	0.00	0.83	0.95	2.44	2.44	0.30	9.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

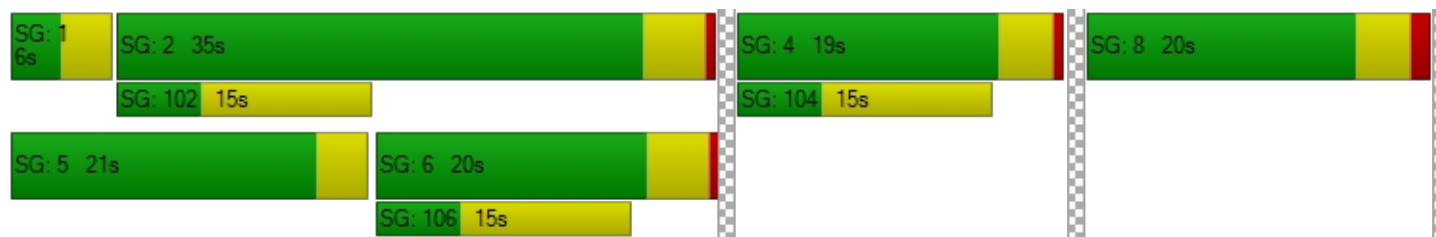
X, volume / capacity	0.76	0.20	0.20	0.00	0.36	0.37	0.75	0.75	0.24	0.35
d, Delay for Lane Group [s/veh]	43.43	4.26	4.26	0.00	6.68	6.83	37.62	37.62	33.69	48.76
Lane Group LOS	D	A	A	A	A	A	D	D	C	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	1.23	1.15	1.15	0.00	2.83	2.60	2.51	2.51	0.66	0.08
50th-Percentile Queue Length [ft]	30.72	28.80	28.77	0.00	70.73	65.12	62.66	62.67	16.39	1.99
95th-Percentile Queue Length [veh]	2.21	2.07	2.07	0.00	5.09	4.69	4.51	4.51	1.18	0.14
95th-Percentile Queue Length [ft]	55.29	51.85	51.78	0.00	127.32	117.22	112.78	112.81	29.50	3.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	43.43	4.26	4.26	0.00	6.72	6.83	37.62	37.62	33.69	48.76	48.76	48.76
Movement LOS	D	A	A	A	A	A	D	D	C	D	D	D
d_A, Approach Delay [s/veh]	8.17			6.75			37.13			48.76		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	12.46											
Intersection LOS	B											
Intersection V/C	0.418											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 6: Healdsburg Ave/Parkland Farms Blvd

Control Type:	Signalized	Delay (sec / veh):	6.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.842

Intersection Setup

Name	Healdsburg Ave		Healdsburg Ave		Parkland Farms Blvd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	1	0
Pocket Length [ft]	100.00	100.00	150.00	100.00	50.00	100.00
Speed [mph]	35.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Healdsburg Ave		Healdsburg Ave		Parkland Farms Blvd	
Base Volume Input [veh/h]	503	149	56	630	90	21
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	143	0	5	169	0	4
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
Right-Turn on Red Volume [veh/h]	0	6	0	0	0	12
Total Hourly Volume [veh/h]	646	143	61	799	90	13
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]	162	36	15	200	23	3
Total Analysis Volume [veh/h]	646	143	61	799	90	13
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	1		3		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	49	0	11	60	20	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	26	26	26	26	26	26
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	2	15	3	3
g / C, Green / Cycle	0.37	0.37	0.07	0.59	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.24	0.25	0.04	0.25	0.03	0.03
s, saturation flow rate [veh/h]	1676	1562	1597	3192	1597	1549
c, Capacity [veh/h]	616	574	112	1886	164	159
d1, Uniform Delay [s]	6.83	6.99	11.73	2.92	10.86	10.87
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.12	1.48	4.05	0.15	1.09	1.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.69	0.54	0.42	0.32	0.32
d, Delay for Lane Group [s/veh]	7.95	8.47	15.79	3.07	11.95	12.02
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	0.95	1.01	0.34	0.04	0.23	0.23
50th-Percentile Queue Length [ft]	23.67	25.20	8.52	0.99	5.75	5.74
95th-Percentile Queue Length [veh]	1.70	1.81	0.61	0.07	0.41	0.41
95th-Percentile Queue Length [ft]	42.60	45.36	15.33	1.79	10.36	10.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.15	8.47	15.79	3.07	11.98	12.02
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	8.21		3.97		11.98	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	6.35					
Intersection LOS	A					
Intersection V/C	0.842					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 7: Healdsburg Ave/Project Access

Control Type:	Signalized	Delay (sec / veh):	9.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.609

Intersection Setup

Name	Healdsburg Ave		Healdsburg Ave		Project Access Rd	
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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Healdsburg Ave		Healdsburg Ave		Project Access Rd	
Base Volume Input [veh/h]	0	503	630	0	0	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	147	0	0	17	13	174
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	147	503	630	17	13	174
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]	37	126	158	4	3	44
Total Analysis Volume [veh/h]	147	503	630	17	13	174
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Split	Split
Signal group	0	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	0	5	5	0	5	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.0	3.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	19	19	0	41	0
Vehicle Extension [s]	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C
C, Cycle Length [s]	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00
g_i, Effective Green Time [s]	43	43	9
g / C, Green / Cycle	0.72	0.72	0.15
(v / s)_i Volume / Saturation Flow Rate	0.49	0.35	0.12
s, saturation flow rate [veh/h]	1322	1854	1595
c, Capacity [veh/h]	1022	1330	238
d1, Uniform Delay [s]	4.78	3.68	24.62
k, delay calibration	0.50	0.50	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00
d2, Incremental Delay [s]	3.02	1.27	5.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.49	0.79
d, Delay for Lane Group [s/veh]	7.80	4.95	30.27
Lane Group LOS	A	A	C
Critical Lane Group	Yes	No	Yes
50th-Percentile Queue Length [veh]	2.54	1.82	2.82
50th-Percentile Queue Length [ft]	63.59	45.57	70.45
95th-Percentile Queue Length [veh]	4.58	3.28	5.07
95th-Percentile Queue Length [ft]	114.46	82.02	126.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.80	7.80	4.95	4.95	30.27	30.27
Movement LOS	A	A	A	A	C	C
d_A, Approach Delay [s/veh]	7.80		4.95		30.27	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	9.39					
Intersection LOS	A					
Intersection V/C	0.609					

Sequence

Ring 1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



B.4 - North Entry Area Plan Environmental Impact Report Traffic Analysis Memo

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Memorandum

Date: November 2, 2018

Project: HEA068

To: Jason Brandman
Kelsey Bennett
First Carbon Solutions

From: Dalene J. Whitlock
dwhitlock@w-trans.com
Cameron Nye
cnye@w-trans.com

Subject: Traffic Analysis of the North Village Project Alternative for the North Entry Area Plan Environmental Impact Report

As requested, W-Trans has completed an analysis of an alternative development scenario for the North Entry Area Plan (NEAP) based on the land uses currently envisioned for the site as part of the North Village Project. The following information builds on the transportation section prepared for the NEAP Environmental Impact Report.

Project Description

As envisioned, the North Village Project Alternative would include a senior living community consisting of 220 senior apartments, 30 assisted living units, and 24 memory care units as well as a hotel with 130 rooms and an associated restaurant with 85 seats. The hotel would also have rooftop and poolside lounges, but these would be reserved for hotel guests only so would not generate additional traffic beyond that associated with the hotel. The project would also include an event facility with seating for approximately 200 guests, 40 single-room occupancy housing units, 10,000 square feet of neighborhood serving retail space, and 10,000 square feet of light industrial space for local artisans.

Trip Generation

The anticipated trip generation for the North Village Project Alternative was estimated using standard rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual*, 10th Edition, 2017 for all proposed uses. Standard rates for "Senior Adult Housing" (ITE LU #252) were applied to the senior apartments, rates for "Assisted Living" (ITE LU #254) were applied to both the assisted living and memory care units, rates for "Hotel" (ITE LU #310) were applied to the hotel, rates for "Quality Restaurant" (ITE LU # 931) were applied to the hotel restaurant, rates for "Shopping Center" (ITE LU # 820) were applied to the neighborhood retail space, rates for "General Light Industrial" (ITE LU #110) were applied to the industrial space envisioned for local artisans, and rates for "Multifamily Housing (Low-rise)" (ITE LU #220) were applied to both the apartment units and single-room occupancy units to provide conservative results. Additionally, to reflect conditions during an event or meeting, rates for "Professional Baseball Stadium" (ITE LU #462) were applied to the event facility. It should be noted that the manual does not include directional information for Quality Restaurant during the am peak hour so it was assumed both trips would be inbound during this period.

Internal Capture Trips

The *Trip Generation Manual* also includes data and methodologies that can be applied to determine the proportion of internal trips that may occur within a development area that includes a variety of land uses.

Internal trips occur at mixed-use developments, and in the case of the North Village Project Alternative would consist of residents and hotel/event guests patronizing the adjacent retail and restaurant uses. If these uses were located on separate sites, these trips would occur on the streets between the sites; however, since they would be located on the same site these trips would be considered internal. The majority of these trips would be made by walking, and the few that would be made by automobile would only travel on-site, so would not affect the adjacent street network. Based on information contained in the *Trip Generation Manual* along with engineering judgement, internal capture rates of 10 percent were applied to the daily and a.m. peak hour hotel trips and 15 percent were applied to the p.m. peak hour hotel trips. Additionally, an internal capture rate of 25 percent was applied to the daily and p.m. peak hour multifamily housing trips while five percent was applied to the a.m. peak hour multifamily housing trips.

Pass-By Trips

Some portion of traffic associated with the proposed project would be drawn from existing traffic on nearby streets. These vehicle trips are not considered "new," but are instead comprised of drivers who are already traveling on the adjacent street system and choose to make an interim stop, and are referred to as "pass-by."

The percentage of these pass-by trips was developed based on information provided in the *Trip Generation Handbook, 3rd Edition*, 2014, which includes pass-by data collected at numerous locations for many land uses. Average pass-by percentages of 40 percent were applied to the daily and p.m. peak hour restaurant trips and 25 percent were applied to the daily and p.m. peak hour shopping center trips. These rates were applied as a deduction to the overall trips generated by the uses after deducting internally captured trips.

Total Project Trip Generation

The expected trip generation potential for the alternative development scenario is indicated in Table 1, with deductions taken for internal capture and pass-by trips. This alternative would be expected to generate an average of 2,895 trips on days without an event, including 157 trips during the a.m. peak hour and 218 trips during the p.m. peak hour. On days with an event, the project site would be expected to generate 3,135 daily trips, including 162 trips during the a.m. peak hour and 248 trips during the p.m. peak hour. Since the site is currently vacant, these trips represent the net increase in traffic associated with the project compared to existing volumes. Compared to the trip generation assumptions applied in the analysis of the NEAP, this is 1,795 fewer trips daily, 97 fewer trips during the a.m. peak hour and 103 fewer p.m. peak hour trips.

Table 1 – Trip Generation Summary

Land Use	Units	Daily		AM Peak Hour				PM Peak Hour			
		Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Senior Living Community											
Senior Adult Housing	220 du	3.70	814	0.20	44	15	29	0.26	57	31	26
Assisted Living	54 beds	2.60	140	0.19	10	6	4	0.26	14	5	9
Total Senior Living			954		54	21	33		71	36	35
Hotel											
Hotel	130 rms	8.36	1,087	0.47	61	36	25	0.60	78	40	38
Quality Restaurant	85 seats	2.60	221	0.02	2	2	0	0.28	24	16	8
Theater	200 seats	1.20	240	0.03	5	5	0	0.15	30	26	4
SRO Housing	40 du	7.32	293	0.46	18	4	14	0.56	22	14	8
Internal Capture		-10%	-109	-10%	-6	-3	-3	-15%	-12	-6	-6
Pass-by		-40%	-88	-	-	-	-	-40%	-14	-7	-7
Total Hotel			1,644		80	44	36		128	83	45
Mixed Use											
Shopping Center	10 ksf	37.75	378	0.94	9	6	3	3.81	38	18	20
General Light Industrial	10 ksf	4.96	50	0.70	7	6	1	0.63	6	1	5
Multifamily Housing (Low-rise)	30 du	7.32	220	0.46	14	3	11	0.56	17	11	6
Internal Capture		-10%	-22	-10%	-1	-1	0	-10%	-2	-1	-1
Pass-by		-25%	-89	-5%	-1	0	-1	-25%	-10	-5	-5
Total Mixed Use			537		28	14	14		49	24	25
Total Project Trips			3,135		162	79	83		248	143	105

Note: du = dwelling unit; ksf = 1,000 square feet; rms = rooms

Trip Distribution

The pattern used to allocate project trips to the street network was determined by reviewing existing turning movements at the study intersections, employment patterns for residents of Healdsburg as indicated by the 2000 Census, and knowledge of the area and surrounding region. The applied distribution percentages are generally consistent with those used for the North Entry Area Plan analysis. The trip distribution assumptions applied in this analysis are shown in Table 2.

Table 2 – Trip Distribution Assumptions

Route	Senior Living	Hotel	Mixed Use
West via Dry Creek Rd	5%	15%	-
East via March Ave	10%	5%	5%
South via Grove St	10%	5%	5%
South via Healdsburg Ave	10%	15%	15%
North via Healdsburg Ave	15%	5%	5%
South via US 101	50%	55%	50%
North via US 101	-	-	20%
TOTAL	100%	100%	100%

Traffic Operation Standards

The same thresholds of significance used to evaluate Plan Conditions, as outlined in the DEIR, were applied to the North Village Project Alternative including LOS D at signalized intersections. LOS F operation is acceptable for stop-controlled approaches to through streets provided the higher levels of delay affect 25 or fewer vehicles per hour. The project would have a significant impact if it causes an intersection currently operating at LOS D or better to fall to LOS E or F. At intersections operating at LOS E or F without project-related traffic, an impact would be considered significant if it causes the average delay to increase by more than five seconds.

Existing plus North Village Project Alternative Conditions

Upon the addition of traffic associated with the North Village Project Alternative to Existing volumes, all but two of the study intersections would be expected to continue operating acceptably. The off-ramp approach from U.S. 101 South to Dry Creek Road is currently operating at LOS F and would be expected to experience additional delay upon adding project-generated trips; however, with the implementation of all-way stop-controls planned to be implemented in 2019, the intersection would be expected to operate acceptably. Additionally, consistent with Existing plus Plan conditions, the northbound approach to the intersection of Dry Creek Road/Grove Street would need to be reconfigured to include a separate left-turn lane with protected left-turn phasing and the existing right-turn lane converted to use for through/right-turn movements. These results are summarized in Table 3 with results for Existing Conditions shown for comparison. North Village Project Alternative traffic volumes at the study intersections are shown in the attached Figure and copies of the level of service calculations are also attached.

Table 3 – Existing and Existing plus Project Peak Hour Intersection Levels of Service

Study Intersection Approach	Existing Conditions				Existing plus Project			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Dry Creek Rd/US 101 South Ramps	55.0	F	70.4	F	74.7	F	104	F
<i>Southbound Approach</i>	<i>491</i>	<i>F</i>	<i>741</i>	<i>F</i>	<i>715</i>	<i>F</i>	<i>1,181</i>	<i>F</i>
With All-way Stop Controls	16.5	C	23.0	C	19.9	C	31.5	D
2. Dry Creek Rd/US 101 North Ramps	14.0	B	6.4	A	18.1	C	8.6	A
<i>Northbound Approach</i>	<i>33.4</i>	<i>D</i>	<i>21.4</i>	<i>C</i>	<i>43.1</i>	<i>E</i>	<i>27.6</i>	<i>D</i>
3. Dry Creek Rd/Grove St	24.5	C	39.0	D	30.4	C	58.5	E
Mitigated (Striping/Phasing Changed)	N/A	N/A	N/A	N/A	16.5	B	19.3	B
4. Dry Creek Rd-March Ave/Healdsburg Ave	35.8	D	34.5	C	35.9	D	34.7	C
5. Healdsburg Ave/Grove St	9.5	A	11.7	B	11.1	B	13.7	B
6. Healdsburg Ave/Parkland Farms Blvd	6.4	A	6.2	A	6.5	A	6.2	A
7. Healdsburg Ave/Project Access	N/A	N/A	N/A	N/A	6.5	A	6.7	A

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*; **Bold text** = deficient operation; shaded cells represent mitigated conditions

Finding – The intersection of Dry Creek Road/US 101 South Ramps would be expected to operate acceptably upon the addition of traffic generated by the development alternative to existing volumes and with the planned installation of all-way stop controls. The rest of the study intersections would continue to operate acceptably, except for Dry Creek Road/Grove Street which would deteriorate to LOS E during the p.m. peak hour with traffic from the North Village Project Alternative.

Recommendation – Consistent with Existing plus Plan Conditions, the northbound approach to Dry Creek Road/Grove Street should be reconfigured to include a dedicated left-turn lane and a shared through/right-turn lane. As indicated in MM Trans-1b, payment of a proportional share of the improvements would be required to mitigate this impact.

Queuing

The project would have an impact if the addition of project trips results in an increase in the queue such that it would either exceed the available storage, or where that would be the case without the project, increase the queue length by 25 feet or more. Storage length at off-ramps was determined by subtracting the deceleration length required for speeds of 65-mph from the total ramp length from gore to stop bar.

The North Village Project Alternative has the same potentially significant queuing impacts as determined under Existing plus Plan Conditions, including on the planned westbound left-turn lane at the intersection of Dry Creek Road/US 101 South Ramps and the eastbound left-turn lane at Dry Creek Road/Grove Street. It should be noted that while queue lengths are expected to exceed available storage at other locations, the proposed project would either increase the queue by less than 25 feet or the turn lane is connected to a two-way left-turn lane with room to accommodate the queue. Therefore, at these locations queuing impacts were considered less than significant. The queuing results are summarized in Table 4.

Table 4– 95th Percentile Left-turn Queues at Study Intersections

Study Intersection Turn Lane	Avail. Storage	95 th Percentile Queues			
		Existing Conditions		Existing plus Project	
		AM Peak	PM Peak	AM Peak	PM Peak
1. Dry Creek Rd/US 101 South Ramps Southbound Off-Ramp	440	250	252	277	276
Westbound LT Lane (AWSC)	250	194	289	248	387
2. Dry Creek Rd/US 101 North Ramps Northbound Off-Ramp	650	240	121	310	186
3. Dry Creek Rd/Grove St Northbound RT Lane	50	13	20	13	20
Eastbound LT Lane	*65	91	86	160	201
Westbound LT Lane	*55	59	58	59	58
Westbound RT Lane	100	15	5	16	6
4. Healdsburg Ave/Dry Creek Rd-March Ave Northbound LT Lane	*160	279	225	279	225
Eastbound LT Lane	*115	181	202	188	202
Eastbound RT Lane	**115	96	70	96	70
Westbound LT Lane	115	100	78	100	78
Southbound LT Lane	*90	88	99	97	106
5. Healdsburg Ave/Grove St Northbound LT Lane	*150	44	49	44	49
Eastbound LT Lane	140	27	54	56	99
Eastbound RT Lane	70	25	24	24	23
6. Healdsburg Ave/Parkland Farms Blvd Southbound LT Lane	*150	3	8	3	22
Westbound LT Lane	**90	10	6	11	7

Notes: All distances are measured in feet; LT = Left-turn; RT = Right-turn; **Bold text** = queue length exceeds available storage; *Turn-lane is connected to a two-way left-turn lane; ** Turn-lane is connected to a through lane

Finding – North Village Project Alternative trips have the potential to extend queuing beyond available storage in the planned westbound left-turn lane at Dry Creek Road/US 101 South Ramps and in the eastbound left-turn lane at Dry Creek Road/Grove Street; however, with the recommendation to reconfigure the northbound approach and alter the signal timing at Dry Creek Road/Grove Street, there would be adequate room for left-turn queues to stack without extending beyond the connected two-way left-turn lane.

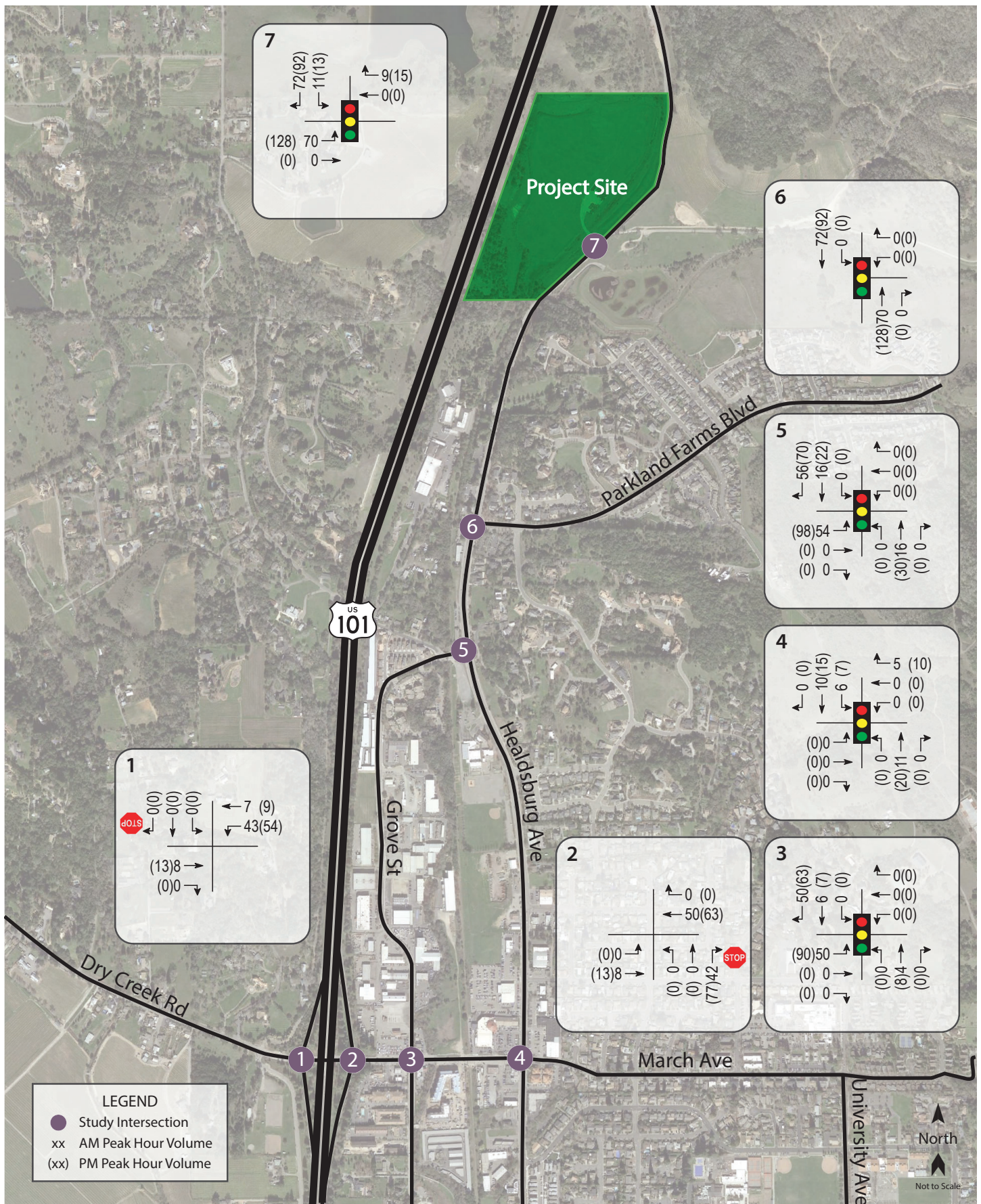
Recommendation – The planned westbound left-turn at Dry Creek Road/US 101 South Ramps should extend the entire length between the US 101 South and North Ramps. Additionally, the westbound approach to Dry Creek Road/US 101 North Ramps should be widened to include a second lane; the left lane would feed into the left-turn lane at the US 101 South Ramps and the right lane would be a shared through/right-turn lane serving through traffic and right turns onto the US 101 North on-ramp. These

improvements would allow queues in the westbound left-turn lane at the U.S. 101 South Ramps to stack beyond the Dry Creek Road/U.S. 101 North Ramps intersection, if needed, without impacting through traffic. Payment of a proportional share of the costs of these improvements, as indicated in MM TRANS-1c and 1d, would be required.

Conclusions and Recommendations

- On days with conferences or meetings in the event facility, the North Village Project Alternative would be expected to generate an average of 3,135 daily trips, including 162 trips during the a.m. peak hour and 248 trips during the p.m. peak hour. This is 1,795 fewer trips daily than assumed for the NEAP, including 97 fewer trips during the a.m. peak hour and 103 fewer p.m. peak hour trips.
- Upon the addition of traffic generated by the North Village Project Alternative to Existing volumes, and with the planned improvements to Dry Creek Road/US 101 South Ramps, all study intersections would be expected to operate acceptably except for Dry Creek Road/Grove Street which would deteriorate to LOS E during the p.m. peak hour.
- There would be adequate storage for queuing at all study intersections except in the planned westbound left-turn lane at Dry Creek Road/US 101 South Ramps and in the eastbound left-turn lane at Dry Creek Road/Grove Street.
- Consistent with Mitigation Measures TRANS-1b, 1c and 1d in the DEIR, proportional share payments would be required towards the cost of installation of improvements to the Dry Creek Road corridor between US 101 South Ramps and Grove Street as well as to the intersections at either end of this segment. Because the North Village Project Alternative would generate fewer trips than the NEAP, the proportional share fees would be lower than for the NEAP.

Attachment: Figure – North Village Project Alternative Traffic Volumes, Level of Service Calculations



Intersection Level Of Service Report

Intersection 1: US 101 S Ramps/Dry Creek Rd

Control Type:	Two-way stop	Delay (sec / veh):	862.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			55.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	0	0	0	94	0	19	0	167	76	494	244	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	8	0	43	7	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]	0	0	0	94	0	19	0	175	76	537	251	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9100	0.9100	0.9100	1.0000	0.9100	0.9100	0.9100	0.9100	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]	0	0	0	26	0	5	0	48	21	148	69	0
Total Analysis Volume [veh/h]	0	0	0	103	0	21	0	192	84	590	276	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	3	0	0
Two-Stage Gap Acceptance		No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	2.44	0.00	0.03	0.00	0.00	0.00	0.46	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	858.51	862.62	9.85	0.00	0.00	0.00	10.14	0.00	0.00
Movement LOS				F	F	A		A	A	B	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	11.08	11.08	0.08	0.00	0.00	0.00	2.10	2.10	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	276.97	276.97	2.12	0.00	0.00	0.00	52.53	52.53	0.00
d_A, Approach Delay [s/veh]	0.00			714.78			0.00			6.91		
Approach LOS	A			F			A			A		
d_I, Intersection Delay [s/veh]	74.74											
Intersection LOS	F											

Intersection Level Of Service Report

Intersection 2: US 101 N Ramps/Dry Creek Rd

Control Type:	Two-way stop	Delay (sec / veh):	64.8
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.734

Intersection Setup

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek 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	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek Road		
Base Volume Input [veh/h]	125	2	572	0	0	0	8	254	0	0	605	103
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	42	0	0	0	0	8	0	0	50	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]	125	2	614	0	0	0	8	262	0	0	655	103
Peak Hour Factor	0.9000	0.9000	0.9000	1.0000	1.0000	1.0000	0.9000	0.9000	1.0000	1.0000	0.9000	0.9000
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]	35	1	171	0	0	0	2	73	0	0	182	29
Total Analysis Volume [veh/h]	139	2	682	0	0	0	9	291	0	0	728	114
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	2	0	0	0
Two-Stage Gap Acceptance	No			
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.73	0.01	0.91	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	64.77	64.21	38.59	0.00	0.00	0.00	9.59	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	F	E				A	A			A	A
95th-Percentile Queue Length [veh/ln]	4.85	4.85	12.38	0.00	0.00	0.00	0.03	0.03	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	121.15	121.15	309.55	0.00	0.00	0.00	0.76	0.76	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	43.07			0.00			0.29			0.00		
Approach LOS	E			A			A			A		
d_I, Intersection Delay [s/veh]	18.08											
Intersection LOS	F											

Intersection Level Of Service Report

Intersection 3: Dry Creek Rd/Grove St

Control Type: Signalized
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 30.4
 Level Of Service: C
 Volume to Capacity (v/c): 1.010

Intersection Setup

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
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	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	75.00	100.00	265.00	75.00	100.00	75.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	86	36	41	20	71	145	106	555	125	64	448	31
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	0	0	6	50	50	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
Right-Turn on Red Volume [veh/h]	0	0	14	0	0	67	0	0	27	0	0	3
Total Hourly Volume [veh/h]	86	40	27	20	77	128	156	555	98	64	448	28
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
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]	25	11	8	6	22	37	45	159	28	18	129	8
Total Analysis Volume [veh/h]	99	46	31	23	89	147	179	638	113	74	515	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	2			0			0			3		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	67
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	3	6	0	3	6	0
Maximum Green [s]	0	15	0	0	15	0	10	30	0	10	30	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0
Split [s]	0	29	0	0	29	0	13	34	0	13	34	0
Vehicle Extension [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	7	0	0	8	0	0	8	0	0	8	0
Pedestrian Clearance [s]	0	16	0	0	15	0	0	9	0	0	8	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.6	0.0	0.0	1.6	0.0	1.0	2.0	0.0	1.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	L	C	C	L	C	R
C, Cycle Length [s]	67	67	67	67	67	67	67	67	67
L, Total Lost Time per Cycle [s]	3.60	3.60	3.60	3.00	4.00	4.00	3.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.60	1.60	1.60	1.00	2.00	2.00	1.00	2.00	2.00
g_i, Effective Green Time [s]	25	25	25	9	27	27	4	22	22
g / C, Green / Cycle	0.38	0.38	0.38	0.13	0.41	0.41	0.06	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.41	0.02	0.32	0.11	0.23	0.23	0.05	0.31	0.02
s, saturation flow rate [veh/h]	354	1422	800	1597	1676	1588	1597	1676	1395
c, Capacity [veh/h]	224	536	360	214	684	648	90	554	461
d1, Uniform Delay [s]	20.28	13.29	16.74	28.28	15.24	15.24	31.26	21.67	15.37
k, delay calibration	0.50	0.04	0.32	0.21	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.62	0.02	7.72	14.77	3.34	3.53	6.62	24.23	0.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

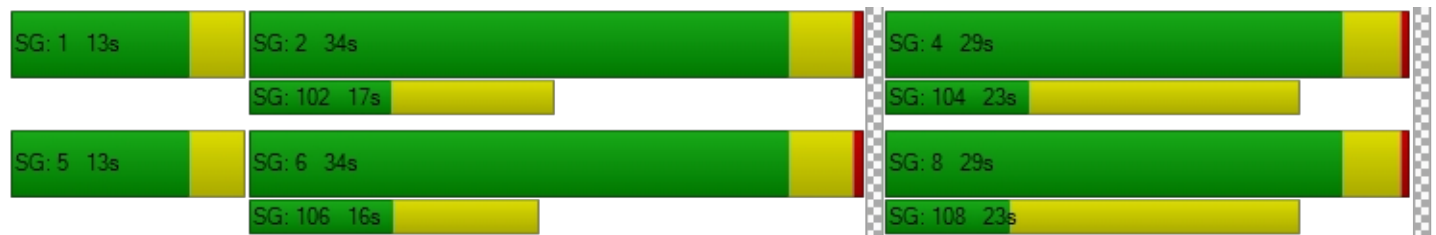
X, volume / capacity	0.65	0.06	0.72	0.84	0.56	0.56	0.82	0.93	0.07
d, Delay for Lane Group [s/veh]	33.90	13.31	24.47	43.05	18.57	18.77	37.88	45.90	15.66
Lane Group LOS	C	B	C	D	B	B	D	D	B
Critical Lane Group	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.94	0.28	3.41	3.55	4.71	4.51	1.30	10.86	0.35
50th-Percentile Queue Length [ft/ln]	73.40	6.95	85.34	88.66	117.84	112.63	32.62	271.56	8.79
95th-Percentile Queue Length [veh/ln]	5.28	0.50	6.14	6.38	8.27	7.99	2.35	16.27	0.63
95th-Percentile Queue Length [ft/ln]	132.12	12.50	153.61	159.59	206.86	199.65	58.72	406.69	15.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.90	33.90	13.31	24.47	24.47	24.47	43.05	18.65	18.77	37.88	45.90	15.66
Movement LOS	C	C	B	C	C	C	D	B	B	D	D	B
d_A, Approach Delay [s/veh]	30.27			24.47			23.36			43.39		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	30.38											
Intersection LOS	C											
Intersection V/C	1.010											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 4: Dry Creek Rd-March Ave/Healdsburg Ave

Control Type:	Signalized	Delay (sec / veh):	35.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.637

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	165.00	100.00	100.00	90.00	100.00	100.00	115.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	201	197	36	56	253	117	131	236	189	64	189	36
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	11	0	6	10	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
Right-Turn on Red Volume [veh/h]	0	0	16	0	0	46	0	0	91	0	0	12
Total Hourly Volume [veh/h]	201	208	20	62	263	71	131	236	98	64	189	29
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
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]	63	65	6	19	82	22	41	74	31	20	59	9
Total Analysis Volume [veh/h]	251	260	25	78	329	89	164	295	123	80	236	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	6			6			5			1		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	96
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	6	0	3	6	0	3	6	0	3	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.6	0.0	3.0	3.6	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0
Split [s]	19	29	0	19	29	0	19	29	0	19	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	8	0	0	8	0	0	9	0	0	9	0
Pedestrian Clearance [s]	0	15	0	0	11	0	0	14	0	0	14	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	2.0	0.0	1.0	2.0	0.0	1.0	1.4	0.0	1.0	1.4	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	96	96	96	96	96	96	96	96	96	96	96
L, Total Lost Time per Cycle [s]	3.00	4.00	4.00	3.00	4.00	4.00	3.00	3.40	3.40	3.00	3.40
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	2.00	2.00	1.00	2.00	2.00	1.00	1.40	1.40	1.00	1.40
g_i, Effective Green Time [s]	16	37	37	6	27	27	12	33	33	6	28
g / C, Green / Cycle	0.17	0.39	0.39	0.06	0.28	0.28	0.12	0.35	0.35	0.06	0.29
(v / s)_i Volume / Saturation Flow Rate	0.16	0.09	0.09	0.05	0.13	0.13	0.10	0.18	0.09	0.05	0.17
s, saturation flow rate [veh/h]	1597	1676	1625	1597	1676	1552	1597	1676	1418	1597	1633
c, Capacity [veh/h]	267	649	629	99	474	439	195	582	492	102	472
d1, Uniform Delay [s]	39.58	19.75	19.76	44.44	28.38	28.47	41.28	24.86	22.43	44.35	29.17
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.96	0.79	0.82	12.57	3.12	3.49	9.28	3.13	1.21	12.33	5.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

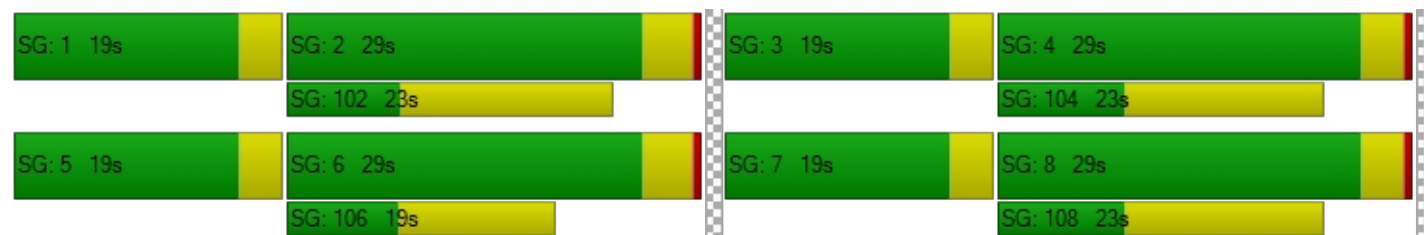
X, volume / capacity	0.94	0.22	0.22	0.78	0.45	0.46	0.84	0.51	0.25	0.78	0.58
d, Delay for Lane Group [s/veh]	54.54	20.54	20.58	57.01	31.50	31.95	50.55	27.99	23.65	56.68	34.24
Lane Group LOS	D	C	C	E	C	C	D	C	C	E	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.87	2.27	2.22	2.15	4.36	4.17	4.26	5.71	2.12	2.21	5.91
50th-Percentile Queue Length [ft/ln]	171.77	56.64	55.40	53.64	109.06	104.22	106.49	142.68	53.07	55.29	147.84
95th-Percentile Queue Length [veh/ln]	11.17	4.08	3.99	3.86	7.79	7.50	7.64	9.63	3.82	3.98	9.90
95th-Percentile Queue Length [ft/ln]	279.24	101.95	99.72	96.55	194.69	187.59	191.11	240.63	95.52	99.52	247.54

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.54	20.56	20.58	57.01	31.66	31.95	50.55	27.99	23.65	56.68	34.24	34.24
Movement LOS	D	C	C	E	C	C	D	C	C	E	C	C
d_A, Approach Delay [s/veh]	36.47			35.70			33.43			39.34		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	35.89											
Intersection LOS	D											
Intersection V/C	0.637											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 5: Healdsburg Ave/Grove St

Control Type: Signalized
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 11.1
 Level Of Service: B
 Volume to Capacity (v/c): 0.283

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Grove St			Private Dwy		
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	1	0	0	1	0	0	1	0	1	0	0	0
Pocket Length [ft]	150.00	100.00	100.00	80.00	100.00	100.00	135.00	100.00	70.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Grove St			Private Dwy		
Base Volume Input [veh/h]	36	198	2	0	277	139	51	0	52	2	2	1
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	16	0	0	16	56	54	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	13	0	0	29	0	0	1
Total Hourly Volume [veh/h]	36	214	2	0	293	182	105	0	23	2	2	0
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
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]	11	67	1	0	92	57	33	0	7	1	1	0
Total Analysis Volume [veh/h]	45	268	3	0	366	228	131	0	29	3	3	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			0			0			3		
Bicycle Volume [bicycles/h]	0			1			1			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	3	6	0	3	6	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	15	30	0	0	20	0	0	15	0
Amber [s]	3.0	3.7	0.0	3.0	3.7	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	1.0	0.0
Split [s]	21	35	0	6	20	0	0	19	0	0	20	0
Vehicle Extension [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	2.1	0.0	1.0	2.1	0.0	0.0	1.6	0.0	0.0	2.2	0.0
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	3.00	4.10	4.10	3.00	4.10	4.10	3.60	3.60	3.60	4.20
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	2.10	2.10	1.00	2.10	2.10	1.60	1.60	1.60	2.20
g_i, Effective Green Time [s]	3	59	59	0	56	56	5	5	5	1
g / C, Green / Cycle	0.03	0.74	0.74	0.00	0.71	0.71	0.07	0.07	0.07	0.01
(v / s)_i Volume / Saturation Flow Rate	0.03	0.07	0.07	0.00	0.17	0.17	0.04	0.04	0.02	0.00
s, saturation flow rate [veh/h]	1774	1863	1855	1774	1863	1601	1774	1774	1525	1817
c, Capacity [veh/h]	59	1371	1366	1	1311	1126	121	121	104	16
d1, Uniform Delay [s]	38.41	3.01	3.01	0.00	4.23	4.26	36.09	36.09	35.44	39.51
k, delay calibration	0.04	0.50	0.50	0.04	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.36	0.14	0.14	0.00	0.43	0.53	1.38	1.38	0.53	5.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

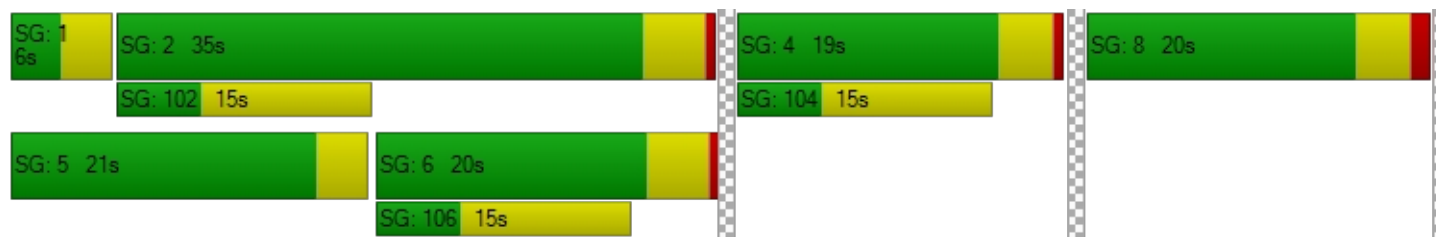
X, volume / capacity	0.76	0.10	0.10	0.00	0.24	0.25	0.54	0.54	0.28	0.39
d, Delay for Lane Group [s/veh]	45.78	3.15	3.15	0.00	4.66	4.79	37.47	37.47	35.96	45.19
Lane Group LOS	D	A	A	A	A	A	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.97	0.45	0.45	0.00	1.46	1.33	1.24	1.24	0.54	0.14
50th-Percentile Queue Length [ft/ln]	24.26	11.37	11.35	0.00	36.49	33.37	31.11	31.11	13.40	3.53
95th-Percentile Queue Length [veh/ln]	1.75	0.82	0.82	0.00	2.63	2.40	2.24	2.24	0.96	0.25
95th-Percentile Queue Length [ft/ln]	43.66	20.46	20.43	0.00	65.68	60.06	56.00	56.00	24.12	6.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	45.78	3.15	3.15	0.00	4.68	4.79	37.47	37.47	35.96	45.19	45.19	45.19
Movement LOS	D	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	9.22			4.72			37.20			45.19		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	11.10											
Intersection LOS	B											
Intersection V/C	0.283											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Healdsburg Ave/Parkland Farms Blvd

Control Type:	Signalized	Delay (sec / veh):	6.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.900

Intersection Setup

Name	Healdsburg Ave		Healdsburg Ave		Parkland Farms Blvd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	1	0
Pocket Length [ft]	100.00	100.00	150.00	100.00	50.00	100.00
Speed [mph]	35.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Healdsburg Ave		Healdsburg Ave		Parkland Farms Blvd	
Base Volume Input [veh/h]	185	77	4	248	150	19
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	70	0	0	72	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
Right-Turn on Red Volume [veh/h]	0	6	0	0	0	12
Total Hourly Volume [veh/h]	255	71	4	320	150	7
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	80	22	1	100	47	2
Total Analysis Volume [veh/h]	319	89	5	400	188	9
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	49	0	11	60	20	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	20	20	20	20	20	20
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	5	0	9	3	3
g / C, Green / Cycle	0.24	0.24	0.01	0.44	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.12	0.13	0.00	0.13	0.06	0.06
s, saturation flow rate [veh/h]	1676	1557	1597	3192	1597	1579
c, Capacity [veh/h]	402	373	14	1412	271	268
d1, Uniform Delay [s]	6.79	6.86	10.17	3.67	7.58	7.58
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.99	1.25	15.00	0.11	0.82	0.83
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.51	0.55	0.36	0.28	0.36	0.37
d, Delay for Lane Group [s/veh]	7.78	8.11	25.17	3.78	8.40	8.41
Lane Group LOS	A	A	C	A	A	A
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.40	0.42	0.07	0.02	0.23	0.23
50th-Percentile Queue Length [ft/ln]	9.88	10.42	1.73	0.53	5.80	5.78
95th-Percentile Queue Length [veh/ln]	0.71	0.75	0.12	0.04	0.42	0.42
95th-Percentile Queue Length [ft/ln]	17.78	18.76	3.12	0.96	10.45	10.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.90	8.11	25.17	3.78	8.40	8.41
Movement LOS	A	A	C	A	A	A
d_A, Approach Delay [s/veh]	7.94		4.04		8.40	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.47					
Intersection LOS	A					
Intersection V/C	0.900					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 7: Healdsburg Ave/Project Access

Control Type:	Signalized	Delay (sec / veh):	6.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.249

Intersection Setup

Name	Healdsburg Ave		Healdsburg Ave		Project Access Rd	
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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Healdsburg Ave		Healdsburg Ave		Project Access Rd	
Base Volume Input [veh/h]	0	203	252	0	0	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	70	0	0	9	11	72
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	203	252	9	11	72
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	56	70	3	3	20
Total Analysis Volume [veh/h]	78	226	280	10	12	80
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Split	Split
Signal group	0	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	0	5	5	0	5	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.0	3.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	19	19	0	41	0
Vehicle Extension [s]	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C
C, Cycle Length [s]	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00
g_i, Effective Green Time [s]	48	48	4
g / C, Green / Cycle	0.79	0.79	0.07
(v / s)_i Volume / Saturation Flow Rate	0.19	0.16	0.06
s, saturation flow rate [veh/h]	1587	1851	1606
c, Capacity [veh/h]	1330	1464	122
d1, Uniform Delay [s]	1.57	1.56	27.20
k, delay calibration	0.50	0.50	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00
d2, Incremental Delay [s]	0.40	0.30	9.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00

Lane Group Results

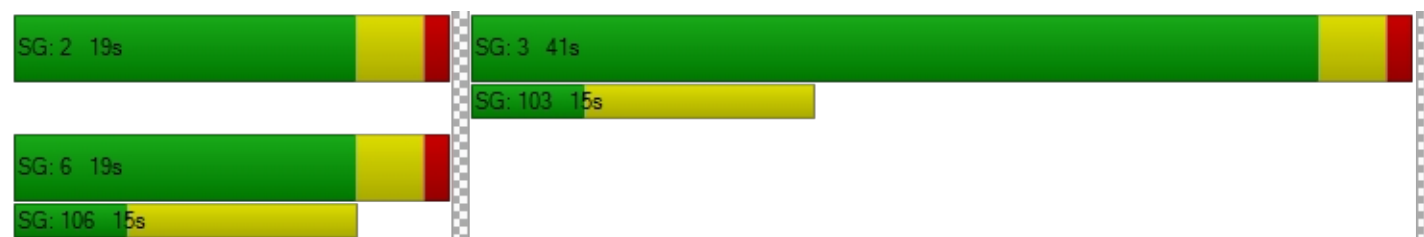
X, volume / capacity	0.23	0.20	0.75
d, Delay for Lane Group [s/veh]	1.97	1.86	36.28
Lane Group LOS	A	A	D
Critical Lane Group	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.22	0.17	1.55
50th-Percentile Queue Length [ft/ln]	5.40	4.17	38.85
95th-Percentile Queue Length [veh/ln]	0.39	0.30	2.80
95th-Percentile Queue Length [ft/ln]	9.73	7.51	69.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	1.97	1.97	1.86	1.86	36.28	36.28
Movement LOS	A	A	A	A	D	D
d_A, Approach Delay [s/veh]	1.97		1.86		36.28	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	6.53					
Intersection LOS	A					
Intersection V/C	0.249					

Sequence

Ring 1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 1: US 101 S Ramps/Dry Creek Rd

Control Type:	All-way stop	Delay (sec / veh):	19.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.856

Intersection Setup

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	275.00	100.00	100.00
Speed [mph]	30.00			55.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	0	0	0	94	0	19	0	167	76	494	244	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	8	0	43	7	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]	0	0	0	94	0	19	0	175	76	537	251	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9100	0.9100	0.9100	1.0000	0.9100	0.9100	0.9100	0.9100	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]	0	0	0	26	0	5	0	48	21	148	69	0
Total Analysis Volume [veh/h]	0	0	0	103	0	21	0	192	84	590	276	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]		487	582	788	690	763
Degree of Utilization, x		0.21	0.04	0.35	0.86	0.36

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]		0.79	0.11	1.58	9.90	1.66
95th-Percentile Queue Length [ft]		19.82	2.81	39.47	247.46	41.39
Approach Delay [s/veh]	0.00	11.58		10.01	24.19	
Approach LOS	A	B		B	C	
Intersection Delay [s/veh]	19.86					
Intersection LOS	C					

Intersection Level Of Service Report

Intersection 3: Dry Creek Rd/Grove St

Control Type: Signalized
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 16.5
 Level Of Service: B
 Volume to Capacity (v/c): 0.740

Intersection Setup

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
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	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	75.00	100.00	265.00	75.00	100.00	75.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	86	36	41	20	71	145	106	555	125	64	448	31
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	0	0	6	50	50	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
Right-Turn on Red Volume [veh/h]	0	0	14	0	0	67	0	0	27	0	0	3
Total Hourly Volume [veh/h]	86	40	27	20	77	128	156	555	98	64	448	28
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
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]	25	11	8	6	22	37	45	159	28	18	129	8
Total Analysis Volume [veh/h]	99	46	31	23	89	147	179	638	113	74	515	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	2			0			0			3		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	3	6	0	3	6	0
Maximum Green [s]	0	15	0	0	15	0	10	30	0	10	30	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0
Split [s]	0	27	0	0	27	0	13	24	0	9	20	0
Vehicle Extension [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	7	0	0	8	0	0	8	0	0	8	0
Pedestrian Clearance [s]	0	16	0	0	15	0	0	9	0	0	8	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.6	0.0	0.0	1.6	0.0	1.0	2.0	0.0	1.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	3.60	3.60	3.00	4.00	4.00	3.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.60	1.60	1.00	2.00	2.00	1.00	2.00	2.00
g_i, Effective Green Time [s]	12	12	8	34	34	3	29	29
g / C, Green / Cycle	0.20	0.20	0.14	0.57	0.57	0.06	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.05	0.17	0.11	0.23	0.23	0.05	0.31	0.02
s, saturation flow rate [veh/h]	1562	1497	1597	1676	1589	1597	1676	1395
c, Capacity [veh/h]	311	364	218	949	900	92	818	681
d1, Uniform Delay [s]	20.26	23.23	25.25	7.34	7.34	27.96	11.37	8.06
k, delay calibration	0.04	0.04	0.14	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.15	0.97	9.82	1.29	1.36	5.86	3.66	0.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

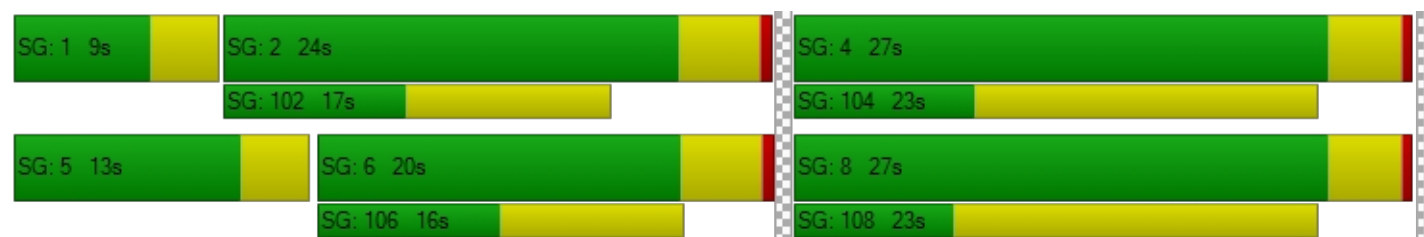
X, volume / capacity	0.25	0.71	0.82	0.41	0.41	0.80	0.63	0.05
d, Delay for Lane Group [s/veh]	20.41	24.20	35.06	8.63	8.70	33.82	15.03	8.19
Lane Group LOS	C	C	D	A	A	C	B	A
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.86	3.30	2.92	2.51	2.40	1.15	5.03	0.21
50th-Percentile Queue Length [ft/ln]	21.54	82.55	72.94	62.71	59.93	28.67	125.71	5.24
95th-Percentile Queue Length [veh/ln]	1.55	5.94	5.25	4.51	4.31	2.06	8.71	0.38
95th-Percentile Queue Length [ft/ln]	38.77	148.60	131.29	112.87	107.87	51.61	217.65	9.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	20.41	20.41	24.20	24.20	24.20	35.06	8.66	8.70	33.82	15.03	8.19
Movement LOS		C	C	C	C	C	D	A	A	C	B	A
d_A, Approach Delay [s/veh]	20.41			24.20			13.75			16.91		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	16.50											
Intersection LOS	B											
Intersection V/C	0.740											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 1: US 101 S Ramps/Dry Creek Rd

Control Type:	Two-way stop	Delay (sec / veh):	1,688.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.055

Intersection Setup

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			55.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	0	0	0	80	1	33	0	227	173	568	208	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	13	0	54	9	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]	0	0	0	80	1	33	0	240	173	622	217	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9300	0.9300	0.9300	1.0000	0.9300	0.9300	0.9300	0.9300	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]	0	0	0	22	0	9	0	65	47	167	58	0
Total Analysis Volume [veh/h]	0	0	0	86	1	35	0	258	186	669	233	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	3	0	0
Two-Stage Gap Acceptance		No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	3.83	0.05	0.04	0.00	0.00	0.00	0.60	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	1651.16	1688.22	9.67	0.00	0.00	0.00	12.93	0.00	0.00
Movement LOS				F	F	A		A	A	B	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	11.03	11.03	0.14	0.00	0.00	0.00	3.57	3.57	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	275.78	275.78	3.40	0.00	0.00	0.00	89.25	89.25	0.00
d_A, Approach Delay [s/veh]	0.00			1180.54			0.00			9.59		
Approach LOS	A			F			A			A		
d_I, Intersection Delay [s/veh]	104.00											
Intersection LOS	F											

Intersection Level Of Service Report

Intersection 2: US 101 N Ramps/Dry Creek Rd

Control Type:	Two-way stop	Delay (sec / veh):	51.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek 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	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek Road		
Base Volume Input [veh/h]	62	0	456	0	0	0	14	296	0	0	714	221
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	77	0	0	0	0	13	0	0	63	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]	62	0	533	0	0	0	14	309	0	0	777	221
Peak Hour Factor	0.9600	0.9600	0.9600	1.0000	1.0000	1.0000	0.9600	0.9600	1.0000	1.0000	0.9600	0.9600
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]	16	0	139	0	0	0	4	80	0	0	202	58
Total Analysis Volume [veh/h]	65	0	555	0	0	0	15	322	0	0	809	230
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	2	0	0	0
Two-Stage Gap Acceptance	No			
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.46	0.00	0.77	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	50.94	51.37	24.83	0.00	0.00	0.00	10.50	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	F	C				B	A			A	A
95th-Percentile Queue Length [veh/ln]	2.11	2.11	7.45	0.00	0.00	0.00	0.06	0.06	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	52.74	52.74	186.25	0.00	0.00	0.00	1.60	1.60	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	27.56			0.00			0.47			0.00		
Approach LOS	D			A			A			A		
d_I, Intersection Delay [s/veh]	8.64											
Intersection LOS	F											

Intersection Level Of Service Report

Intersection 3: Dry Creek Rd/Grove St

Control Type: Signalized
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 58.5
 Level Of Service: E
 Volume to Capacity (v/c): 1.586

Intersection Setup

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
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	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	75.00	100.00	265.00	75.00	100.00	75.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	172	54	108	16	71	158	113	500	119	72	572	22
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	8	0	0	7	63	90	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
Right-Turn on Red Volume [veh/h]	0	0	59	0	0	57	0	0	28	0	0	10
Total Hourly Volume [veh/h]	172	62	49	16	78	164	203	500	91	72	572	12
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
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]	44	16	13	4	20	42	52	128	23	18	146	3
Total Analysis Volume [veh/h]	176	63	50	16	80	167	207	510	93	73	584	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	4			0			0			4		
Bicycle Volume [bicycles/h]	4			1			3			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	67
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	3	6	0	3	6	0
Maximum Green [s]	0	15	0	0	15	0	10	30	0	10	30	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0
Split [s]	0	29	0	0	29	0	13	34	0	13	34	0
Vehicle Extension [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	7	0	0	8	0	0	8	0	0	8	0
Pedestrian Clearance [s]	0	16	0	0	15	0	0	9	0	0	8	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.6	0.0	0.0	1.6	0.0	1.0	2.0	0.0	1.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	L	C	C	L	C	R
C, Cycle Length [s]	67	67	67	67	67	67	67	67	67
L, Total Lost Time per Cycle [s]	3.60	3.60	3.60	3.00	4.00	4.00	3.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.60	1.60	1.60	1.00	2.00	2.00	1.00	2.00	2.00
g_i, Effective Green Time [s]	25	25	25	10	27	27	4	21	21
g / C, Green / Cycle	0.38	0.38	0.38	0.15	0.41	0.41	0.06	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.82	0.04	0.30	0.13	0.18	0.19	0.05	0.35	0.01
s, saturation flow rate [veh/h]	290	1400	883	1597	1676	1572	1597	1676	1425
c, Capacity [veh/h]	203	527	389	238	687	644	89	530	451
d1, Uniform Delay [s]	25.81	13.51	16.61	27.86	14.32	14.36	31.29	22.91	15.80
k, delay calibration	0.50	0.04	0.26	0.31	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	120.33	0.03	4.85	22.24	2.13	2.32	6.70	69.84	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

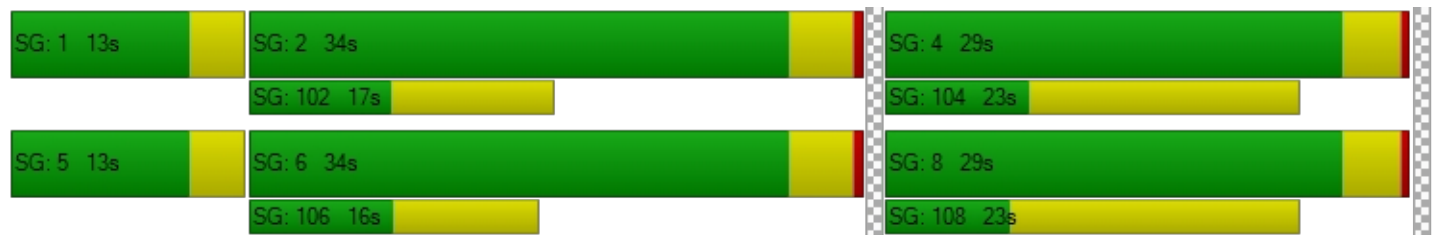
X, volume / capacity	1.18	0.09	0.68	0.87	0.45	0.46	0.82	1.10	0.03
d, Delay for Lane Group [s/veh]	146.14	13.54	21.46	50.10	16.45	16.68	37.99	92.75	15.91
Lane Group LOS	F	B	C	D	B	B	D	F	B
Critical Lane Group	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	9.95	0.46	3.23	4.55	3.49	3.35	1.29	17.93	0.13
50th-Percentile Queue Length [ft/ln]	248.84	11.38	80.70	113.80	87.31	83.73	32.24	448.36	3.33
95th-Percentile Queue Length [veh/ln]	16.60	0.82	5.81	8.05	6.29	6.03	2.32	26.40	0.24
95th-Percentile Queue Length [ft/ln]	415.09	20.48	145.26	201.28	157.15	150.71	58.03	660.04	5.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	146.14	146.14	13.54	21.46	21.46	21.46	50.10	16.54	16.68	37.99	92.75	15.91
Movement LOS	F	F	B	C	C	C	D	B	B	D	F	B
d_A, Approach Delay [s/veh]	123.20			21.46			25.13			85.39		
Approach LOS	F			C			C			F		
d_I, Intersection Delay [s/veh]	58.46											
Intersection LOS	E											
Intersection V/C	1.586											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 4: Dry Creek Rd-March Ave/Healdsburg Ave

Control Type:	Signalized	Delay (sec / veh):	34.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.645

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	165.00	100.00	100.00	90.00	100.00	100.00	115.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	193	274	59	76	311	163	167	186	175	57	249	39
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	20	0	7	15	0	0	0	0	0	0	10
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
Right-Turn on Red Volume [veh/h]	0	0	12	0	0	53	0	0	82	0	0	15
Total Hourly Volume [veh/h]	193	294	47	83	326	110	167	186	93	57	249	34
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	51	77	12	22	86	29	44	49	24	15	66	9
Total Analysis Volume [veh/h]	203	309	49	87	343	116	176	196	98	60	262	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	4			2			7			2		
Bicycle Volume [bicycles/h]	1			2			1			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	96
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	6	0	3	6	0	3	6	0	3	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.6	0.0	3.0	3.6	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0
Split [s]	19	29	0	19	29	0	19	29	0	19	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	8	0	0	8	0	0	9	0	0	9	0
Pedestrian Clearance [s]	0	15	0	0	11	0	0	14	0	0	14	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	2.0	0.0	1.0	2.0	0.0	1.0	1.4	0.0	1.0	1.4	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	96	96	96	96	96	96	96	96	96	96	96
L, Total Lost Time per Cycle [s]	3.00	4.00	4.00	3.00	4.00	4.00	3.00	3.40	3.40	3.00	3.40
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	2.00	2.00	1.00	2.00	2.00	1.00	1.40	1.40	1.00	1.40
g_i, Effective Green Time [s]	14	35	35	7	28	28	12	36	36	5	28
g / C, Green / Cycle	0.15	0.37	0.37	0.07	0.29	0.29	0.13	0.38	0.38	0.05	0.30
(v / s)_i Volume / Saturation Flow Rate	0.13	0.11	0.11	0.05	0.14	0.15	0.11	0.12	0.07	0.04	0.18
s, saturation flow rate [veh/h]	1597	1676	1586	1597	1676	1516	1597	1676	1403	1597	1641
c, Capacity [veh/h]	234	614	581	110	484	438	207	632	529	77	484
d1, Uniform Delay [s]	40.11	21.66	21.70	44.05	28.32	28.46	40.91	21.13	20.06	45.27	29.18
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.37	1.23	1.33	11.64	3.53	4.11	9.26	1.27	0.77	15.72	5.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

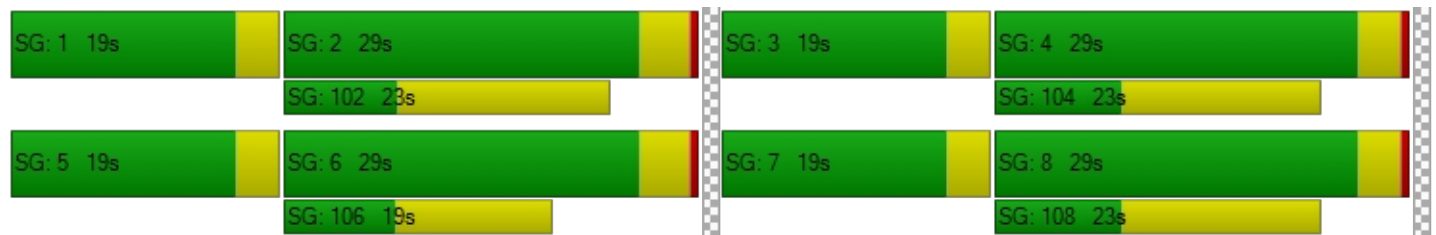
X, volume / capacity	0.87	0.30	0.30	0.79	0.49	0.50	0.85	0.31	0.19	0.78	0.62
d, Delay for Lane Group [s/veh]	49.48	22.89	23.04	55.69	31.85	32.57	50.17	22.40	20.83	60.99	34.93
Lane Group LOS	D	C	C	E	C	C	D	C	C	E	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.24	3.08	2.98	2.36	4.87	4.61	4.56	3.27	1.56	1.74	6.57
50th-Percentile Queue Length [ft/ln]	130.96	77.02	74.49	58.95	121.68	115.18	113.97	81.76	38.99	43.50	164.21
95th-Percentile Queue Length [veh/ln]	8.99	5.55	5.36	4.24	8.49	8.13	8.06	5.89	2.81	3.13	10.77
95th-Percentile Queue Length [ft/ln]	224.80	138.64	134.08	106.11	212.13	203.18	201.51	147.17	70.19	78.30	269.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.48	22.95	23.04	55.69	32.07	32.57	50.17	22.40	20.83	60.99	34.93	34.93
Movement LOS	D	C	C	E	C	C	D	C	C	E	C	C
d_A, Approach Delay [s/veh]	32.56			35.94			32.47			39.30		
Approach LOS	C			D			C			D		
d_I, Intersection Delay [s/veh]	34.74											
Intersection LOS	C											
Intersection V/C	0.645											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 5: Healdsburg Ave/Grove St

Control Type: Signalized
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 13.7
 Level Of Service: B
 Volume to Capacity (v/c): 0.294

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Grove St			Private Dwy		
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	1	0	0	1	0	0	1	0	1	0	0	0
Pocket Length [ft]	150.00	100.00	100.00	80.00	100.00	100.00	135.00	100.00	70.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Grove St			Private Dwy		
Base Volume Input [veh/h]	47	269	3	0	309	104	113	1	63	3	0	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	30	0	0	22	70	98	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	18	0	0	36	0	0	0
Total Hourly Volume [veh/h]	47	299	3	0	331	156	211	1	27	3	0	0
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]	13	81	1	0	90	42	57	0	7	1	0	0
Total Analysis Volume [veh/h]	51	325	3	0	360	170	229	1	29	3	0	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	1			0			0			3		
Bicycle Volume [bicycles/h]	2			3			1			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	3	6	0	3	6	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	15	30	0	0	20	0	0	15	0
Amber [s]	3.0	3.7	0.0	3.0	3.7	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	1.0	0.0
Split [s]	21	35	0	6	20	0	0	19	0	0	20	0
Vehicle Extension [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	2.1	0.0	1.0	2.1	0.0	0.0	1.6	0.0	0.0	2.2	0.0
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	3.00	4.10	4.10	3.00	4.10	4.10	3.60	3.60	3.60	4.20
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	2.10	2.10	1.00	2.10	2.10	1.60	1.60	1.60	2.20
g_i, Effective Green Time [s]	3	58	58	0	55	55	7	7	7	0
g / C, Green / Cycle	0.04	0.72	0.72	0.00	0.68	0.68	0.09	0.09	0.09	0.00
(v / s)_i Volume / Saturation Flow Rate	0.03	0.09	0.09	0.00	0.15	0.15	0.06	0.06	0.02	0.00
s, saturation flow rate [veh/h]	1774	1863	1856	1774	1863	1640	1774	1775	1555	1774
c, Capacity [veh/h]	67	1338	1333	1	1269	1117	160	160	140	8
d1, Uniform Delay [s]	38.19	3.49	3.49	0.00	4.78	4.82	35.45	35.45	33.78	39.74
k, delay calibration	0.04	0.50	0.50	0.04	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.44	0.19	0.19	0.00	0.40	0.47	2.25	2.25	0.27	9.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

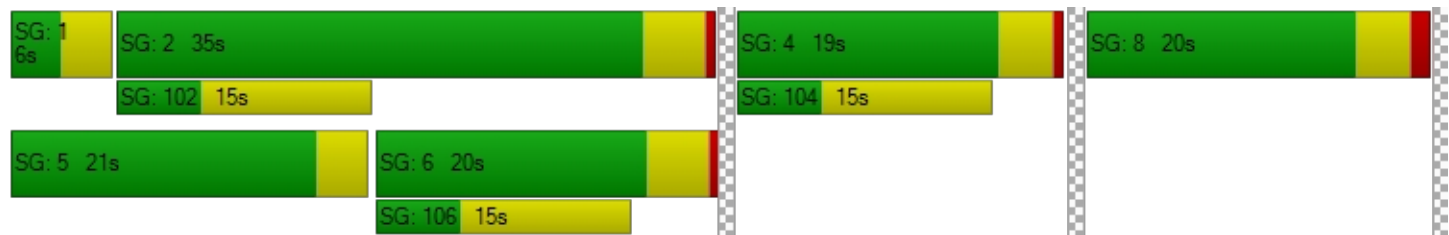
X, volume / capacity	0.76	0.12	0.12	0.00	0.22	0.23	0.72	0.72	0.21	0.35
d, Delay for Lane Group [s/veh]	44.63	3.68	3.68	0.00	5.18	5.29	37.70	37.70	34.05	48.76
Lane Group LOS	D	A	A	A	A	A	D	D	C	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.08	0.63	0.63	0.00	1.42	1.33	2.21	2.21	0.52	0.08
50th-Percentile Queue Length [ft/ln]	27.03	15.85	15.83	0.00	35.60	33.21	55.15	55.17	12.91	1.99
95th-Percentile Queue Length [veh/ln]	1.95	1.14	1.14	0.00	2.56	2.39	3.97	3.97	0.93	0.14
95th-Percentile Queue Length [ft/ln]	48.65	28.53	28.49	0.00	64.08	59.78	99.27	99.30	23.25	3.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	44.63	3.68	3.68	0.00	5.20	5.29	37.70	37.70	34.05	48.76	48.76	48.76
Movement LOS	D	A	A	A	A	A	D	D	C	D	D	D
d_A, Approach Delay [s/veh]	9.19			5.23			37.29			48.76		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	13.71											
Intersection LOS	B											
Intersection V/C	0.294											

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 6: Healdsburg Ave/Parkland Farms Blvd

Control Type:	Signalized	Delay (sec / veh):	6.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.883

Intersection Setup

Name	Healdsburg Ave		Healdsburg Ave		Parkland Farms Blvd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	1	0
Pocket Length [ft]	100.00	100.00	150.00	100.00	50.00	100.00
Speed [mph]	35.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Healdsburg Ave		Healdsburg Ave		Parkland Farms Blvd	
Base Volume Input [veh/h]	227	149	34	317	88	7
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	128	0	0	92	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
Right-Turn on Red Volume [veh/h]	0	6	0	0	0	12
Total Hourly Volume [veh/h]	355	143	34	409	88	0
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	95	38	9	110	24	0
Total Analysis Volume [veh/h]	382	154	37	440	95	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	1		3		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	49	0	11	60	20	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	22	22	22	22	22	22
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	6	1	11	2	2
g / C, Green / Cycle	0.30	0.30	0.05	0.53	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.16	0.18	0.02	0.14	0.03	0.03
s, saturation flow rate [veh/h]	1676	1502	1597	3192	1597	1597
c, Capacity [veh/h]	499	447	77	1690	166	166
d1, Uniform Delay [s]	6.41	6.55	10.11	2.80	9.03	9.03
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.90	1.29	4.50	0.08	0.93	0.93
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.54	0.60	0.48	0.26	0.29	0.29
d, Delay for Lane Group [s/veh]	7.31	7.85	14.61	2.89	9.96	9.96
Lane Group LOS	A	A	B	A	A	A
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.49	0.53	0.19	0.02	0.16	0.16
50th-Percentile Queue Length [ft/ln]	12.13	13.22	4.69	0.48	3.88	3.88
95th-Percentile Queue Length [veh/ln]	0.87	0.95	0.34	0.03	0.28	0.28
95th-Percentile Queue Length [ft/ln]	21.83	23.80	8.44	0.86	6.99	6.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.47	7.85	14.61	2.89	9.96	9.96
Movement LOS	A	A	B	A	A	A
d_A, Approach Delay [s/veh]	7.58		3.79		9.96	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.15					
Intersection LOS	A					
Intersection V/C	0.883					

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 7: Healdsburg Ave/Project Access

Control Type:	Signalized	Delay (sec / veh):	6.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.355

Intersection Setup

Name	Healdsburg Ave		Healdsburg Ave		Project Access Rd	
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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Healdsburg Ave		Healdsburg Ave		Project Access Rd	
Base Volume Input [veh/h]	0	234	351	0	0	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	128	0	0	15	13	92
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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	128	234	351	15	13	92
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	63	94	4	3	25
Total Analysis Volume [veh/h]	138	252	377	16	14	99
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Split	Split
Signal group	0	2	6	0	3	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	0	5	5	0	5	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.0	3.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	36	36	0	24	0
Vehicle Extension [s]	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C
C, Cycle Length [s]	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00
g_i, Effective Green Time [s]	47	47	5
g / C, Green / Cycle	0.78	0.78	0.09
(v / s)_i Volume / Saturation Flow Rate	0.28	0.21	0.07
s, saturation flow rate [veh/h]	1371	1849	1605
c, Capacity [veh/h]	1143	1433	148
d1, Uniform Delay [s]	2.01	1.93	26.64
k, delay calibration	0.50	0.50	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00
d2, Incremental Delay [s]	0.81	0.47	8.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.27	0.77
d, Delay for Lane Group [s/veh]	2.82	2.41	34.63
Lane Group LOS	A	A	C
Critical Lane Group	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.66	0.39	1.85
50th-Percentile Queue Length [ft/ln]	16.49	9.67	46.20
95th-Percentile Queue Length [veh/ln]	1.19	0.70	3.33
95th-Percentile Queue Length [ft/ln]	29.69	17.41	83.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.82	2.82	2.41	2.41	34.63	34.63
Movement LOS	A	A	A	A	C	C
d_A, Approach Delay [s/veh]	2.82		2.41		34.63	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	6.65					
Intersection LOS	A					
Intersection V/C	0.355					

Sequence

Ring 1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SG: 2 36s

SG: 3 24s

SG: 103 15s

SG: 6 36s

SG: 106 15s

Intersection Level Of Service Report

Intersection 1: US 101 S Ramps/Dry Creek Rd

Control Type:	All-way stop	Delay (sec / veh):	31.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.991

Intersection Setup

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	275.00	100.00	100.00
Speed [mph]	30.00			55.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	0	0	0	80	1	33	0	227	173	568	208	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	13	0	54	9	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]	0	0	0	80	1	33	0	240	173	622	217	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9300	0.9300	0.9300	1.0000	0.9300	0.9300	0.9300	0.9300	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]	0	0	0	22	0	9	0	65	47	167	58	0
Total Analysis Volume [veh/h]	0	0	0	86	1	35	0	258	186	669	233	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]		462	547	788	675	745
Degree of Utilization, x		0.19	0.06	0.56	0.99	0.31

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]		0.69	0.20	3.57	15.47	1.34
95th-Percentile Queue Length [ft]		17.16	5.11	89.36	386.68	33.42
Approach Delay [s/veh]	0.00	11.56		13.30	43.18	
Approach LOS	A	B		B	E	
Intersection Delay [s/veh]	31.51					
Intersection LOS	D					

Intersection Level Of Service Report

Intersection 3: Dry Creek Rd/Grove St

Control Type: Signalized
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes

Delay (sec / veh): 19.3
 Level Of Service: B
 Volume to Capacity (v/c): 0.820

Intersection Setup

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
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	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	75.00	100.00	265.00	75.00	100.00	75.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Grove St			Grove St			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	172	54	108	16	71	158	113	500	119	72	572	22
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	8	0	0	7	63	90	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
Right-Turn on Red Volume [veh/h]	0	0	59	0	0	57	0	0	28	0	0	10
Total Hourly Volume [veh/h]	172	62	49	16	78	164	203	500	91	72	572	12
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
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]	44	16	13	4	20	42	52	128	23	18	146	3
Total Analysis Volume [veh/h]	176	63	50	16	80	167	207	510	93	73	584	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	4			0			0			4		
Bicycle Volume [bicycles/h]	4			1			3			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	3	6	0	3	6	0
Maximum Green [s]	0	15	0	0	15	0	10	30	0	10	30	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0
Split [s]	0	27	0	0	27	0	13	21	0	12	20	0
Vehicle Extension [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	7	0	0	8	0	0	8	0	0	8	0
Pedestrian Clearance [s]	0	16	0	0	15	0	0	9	0	0	8	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.6	0.0	0.0	1.6	0.0	1.0	2.0	0.0	1.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	3.60	3.60	3.00	4.00	4.00	3.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.60	1.60	1.00	2.00	2.00	1.00	2.00	2.00
g_i, Effective Green Time [s]	12	12	9	34	34	3	28	28
g / C, Green / Cycle	0.20	0.20	0.15	0.56	0.56	0.06	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.07	0.18	0.13	0.18	0.19	0.05	0.35	0.01
s, saturation flow rate [veh/h]	1538	1477	1597	1676	1573	1597	1676	1425
c, Capacity [veh/h]	315	366	248	942	884	91	778	661
d1, Uniform Delay [s]	20.52	23.09	24.65	7.07	7.09	27.99	13.24	8.70
k, delay calibration	0.04	0.04	0.23	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.26	1.00	14.39	0.93	1.01	5.94	6.58	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

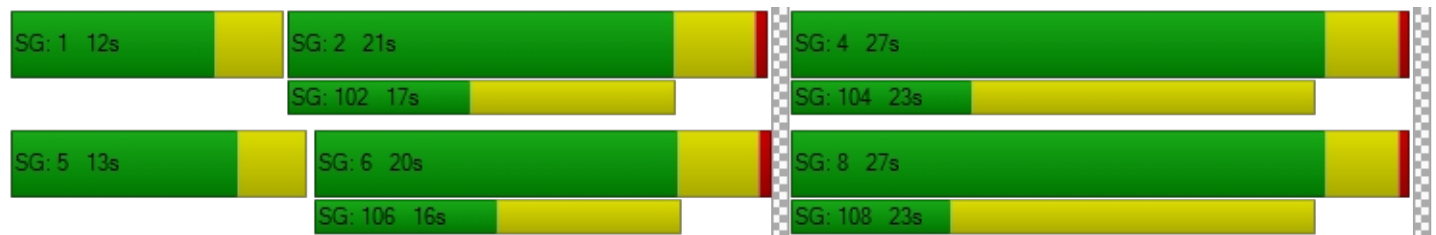
X, volume / capacity	0.36	0.72	0.84	0.33	0.33	0.80	0.75	0.02
d, Delay for Lane Group [s/veh]	20.77	24.09	39.04	8.00	8.10	33.93	19.83	8.75
Lane Group LOS	C	C	D	A	A	C	B	A
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.29	3.35	3.66	1.92	1.84	1.13	6.84	0.08
50th-Percentile Queue Length [ft/ln]	32.24	83.71	91.41	47.89	45.92	28.35	171.02	2.06
95th-Percentile Queue Length [veh/ln]	2.32	6.03	6.58	3.45	3.31	2.04	11.13	0.15
95th-Percentile Queue Length [ft/ln]	58.02	150.68	164.55	86.19	82.66	51.03	278.26	3.71

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	20.77	20.77	24.09	24.09	24.09	39.04	8.04	8.10	33.93	19.83	8.75
Movement LOS		C	C	C	C	C	D	A	A	C	B	A
d_A, Approach Delay [s/veh]	20.77			24.09			15.97			21.17		
Approach LOS	C			C			B			C		
d_I, Intersection Delay [s/veh]	19.29											
Intersection LOS	B											
Intersection V/C	0.820											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



B.5 - North Entry Area Plan Environmental Impact Report Cumulative Without Planned Improvements LOS

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Intersection Level Of Service Report

Intersection 1: US 101 S Ramps/Dry Creek Rd

Control Type:	All-way stop	Delay (sec / veh):	21.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.879

Intersection Setup

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	275.00	100.00	100.00
Speed [mph]	30.00			55.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	0	0	0	108	0	24	0	181	151	602	258	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	0	0	0	108	0	24	0	181	151	602	258	0
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]	0	0	0	27	0	6	0	45	38	151	65	0
Total Analysis Volume [veh/h]	0	0	0	108	0	24	0	181	151	602	258	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]		481	573	802	685	757
Degree of Utilization, x		0.22	0.04	0.41	0.88	0.34

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]		0.85	0.13	2.05	10.70	1.51
95th-Percentile Queue Length [ft]		21.36	3.27	51.19	267.48	37.82
Approach Delay [s/veh]	0.00	11.79		10.62	26.61	
Approach LOS	A	B		B	D	
Intersection Delay [s/veh]	21.12					
Intersection LOS	C					

Intersection Level Of Service Report

Intersection 2: US 101 N Ramps/Dry Creek Rd

Control Type:	Two-way stop	Delay (sec / veh):	81.8
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.088

Intersection Setup

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek 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	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek Road		
Base Volume Input [veh/h]	129	2	826	0	0	0	8	280	0	0	708	138
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	129	2	826	0	0	0	8	280	0	0	708	138
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	1	207	0	0	0	2	70	0	0	177	35
Total Analysis Volume [veh/h]	129	2	826	0	0	0	8	280	0	0	708	138
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	2	0	0	0
Two-Stage Gap Acceptance	No			
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.66	0.01	1.09	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	54.03	53.85	81.81	0.00	0.00	0.00	9.60	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	F	F				A	A			A	A
95th-Percentile Queue Length [veh]	4.04	4.04	22.29	0.00	0.00	0.00	1.67	1.67	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	100.91	100.91	557.24	0.00	0.00	0.00	41.84	41.84	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	78.00			0.00			0.27			0.00		
Approach LOS	F			A			A			A		
d_I, Intersection Delay [s/veh]	35.74											
Intersection LOS	F											

Intersection Level Of Service Report

Intersection 4: Dry Creek Rd-March Ave/Healdsburg Ave

Control Type:	Signalized	Delay (sec / veh):	36.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.656

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	165.00	100.00	100.00	90.00	100.00	100.00	115.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	255	281	36	62	265	177	235	274	207	64	199	41
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	16	0	0	46	0	0	91	0	0	12
Total Hourly Volume [veh/h]	255	281	20	62	265	131	235	274	116	64	199	29
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]	64	70	5	16	66	33	59	69	29	16	50	7
Total Analysis Volume [veh/h]	255	281	20	62	265	131	235	274	116	64	199	29
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	6			6			5			1		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	96
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	6	0	3	6	0	3	6	0	3	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.6	0.0	3.0	3.6	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0
Split [s]	19	29	0	19	29	0	19	29	0	19	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	8	0	0	8	0	0	9	0	0	9	0
Pedestrian Clearance [s]	0	15	0	0	11	0	0	14	0	0	14	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	2.0	0.0	1.0	2.0	0.0	1.0	1.4	0.0	1.0	1.4	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	96	96	96	96	96	96	96	96	96	96	96
L, Total Lost Time per Cycle [s]	3.00	4.00	4.00	3.00	4.00	4.00	3.00	3.40	3.40	3.00	3.40
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	2.00	2.00	1.00	2.00	2.00	1.00	1.40	1.40	1.00	1.40
g_i, Effective Green Time [s]	16	36	36	5	25	25	16	37	37	5	26
g / C, Green / Cycle	0.17	0.38	0.38	0.05	0.26	0.26	0.17	0.38	0.38	0.05	0.27
(v / s)_i Volume / Saturation Flow Rate	0.16	0.09	0.09	0.04	0.12	0.13	0.15	0.16	0.08	0.04	0.14
s, saturation flow rate [veh/h]	1597	1676	1637	1597	1676	1488	1597	1676	1418	1597	1635
c, Capacity [veh/h]	267	634	619	79	437	388	264	640	541	82	437
d1, Uniform Delay [s]	39.70	20.44	20.45	45.17	29.95	30.10	39.24	21.98	20.03	45.08	30.01
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	17.11	0.89	0.92	15.26	3.62	4.35	9.82	2.09	0.91	14.81	4.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

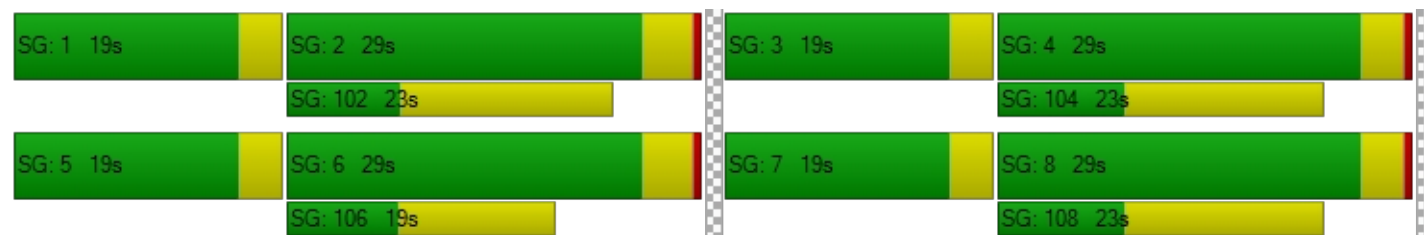
X, volume / capacity	0.96	0.24	0.24	0.78	0.47	0.49	0.89	0.43	0.21	0.78	0.52
d, Delay for Lane Group [s/veh]	56.81	21.33	21.36	60.43	33.57	34.44	49.06	24.08	20.93	59.89	34.42
Lane Group LOS	E	C	C	E	C	C	D	C	C	E	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh]	7.14	2.44	2.40	1.77	4.35	4.08	6.06	4.83	1.86	1.83	4.95
50th-Percentile Queue Length [ft]	178.48	61.12	60.08	44.31	108.68	101.98	151.62	120.74	46.39	45.84	123.78
95th-Percentile Queue Length [veh]	11.52	4.40	4.33	3.19	7.77	7.34	10.10	8.43	3.34	3.30	8.60
95th-Percentile Queue Length [ft]	288.03	110.01	108.15	79.75	194.16	183.56	252.59	210.84	83.50	82.51	215.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.81	21.34	21.36	60.43	33.76	34.44	49.06	24.08	20.93	59.89	34.42	34.42
Movement LOS	E	C	C	E	C	C	D	C	C	E	C	C
d_A, Approach Delay [s/veh]	37.61			37.57			32.89			40.00		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	36.43											
Intersection LOS	D											
Intersection V/C	0.656											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 1: US 101 S Ramps/Dry Creek Rd

Control Type:	All-way stop	Delay (sec / veh):	81.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.263

Intersection Setup

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	275.00	100.00	100.00
Speed [mph]	30.00			55.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	0	0	0	133	1	38	0	245	189	854	222	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	0	0	0	133	1	38	0	245	189	854	222	0
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]	0	0	0	33	0	10	0	61	47	214	56	0
Total Analysis Volume [veh/h]	0	0	0	133	1	38	0	245	189	854	222	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]		468	555	793	854	747
Degree of Utilization, x		0.29	0.07	0.55	1.26	0.30

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]		1.17	0.22	3.38	32.19	1.25
95th-Percentile Queue Length [ft]		29.25	5.50	84.42	804.86	31.16
Approach Delay [s/veh]	0.00	12.61		12.90	119.52	
Approach LOS	A	B		B	F	
Intersection Delay [s/veh]	81.08					
Intersection LOS	F					

Intersection Level Of Service Report

Intersection 2: US 101 N Ramps/Dry Creek Rd

Control Type:	Two-way stop	Delay (sec / veh):	107.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek 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	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek Road		
Base Volume Input [veh/h]	68	0	708	0	0	0	14	359	0	0	995	280
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	68	0	708	0	0	0	14	359	0	0	995	280
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]	17	0	177	0	0	0	4	90	0	0	249	70
Total Analysis Volume [veh/h]	68	0	708	0	0	0	14	359	0	0	995	280
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	2	0	0	0
Two-Stage Gap Acceptance	No			
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.72	0.00	1.03	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	107.66	107.88	67.66	0.00	0.00	0.00	11.78	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	F	F				B	A			A	A
95th-Percentile Queue Length [veh]	3.66	3.66	17.77	0.00	0.00	0.00	5.24	5.24	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	91.42	91.42	444.27	0.00	0.00	0.00	131.00	131.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	71.16			0.00			0.44			0.00		
Approach LOS	F			A			A			A		
d_I, Intersection Delay [s/veh]	22.85											
Intersection LOS	F											

Intersection Level Of Service Report

Intersection 4: Dry Creek Rd-March Ave/Healdsburg Ave

Control Type:	Signalized	Delay (sec / veh):	51.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.862

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	165.00	100.00	100.00	90.00	100.00	100.00	115.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	275	352	59	79	424	302	299	197	255	57	263	43
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Right-Turn on Red Volume [veh/h]	0	0	12	0	0	53	0	0	82	0	0	15
Total Hourly Volume [veh/h]	275	352	47	79	424	249	299	197	173	57	263	28
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]	69	88	12	20	106	62	75	49	43	14	66	7
Total Analysis Volume [veh/h]	275	352	47	79	424	249	299	197	173	57	263	28
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	4			2			7			2		
Bicycle Volume [bicycles/h]	1			2			1			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	96
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	6	0	3	6	0	3	6	0	3	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.6	0.0	3.0	3.6	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0
Split [s]	19	29	0	19	29	0	19	29	0	19	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	8	0	0	8	0	0	9	0	0	9	0
Pedestrian Clearance [s]	0	15	0	0	11	0	0	14	0	0	14	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	2.0	0.0	1.0	2.0	0.0	1.0	1.4	0.0	1.0	1.4	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	96	96	96	96	96	96	96	96	96	96	96
L, Total Lost Time per Cycle [s]	3.00	4.00	4.00	3.00	4.00	4.00	3.00	3.40	3.40	3.00	3.40
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	2.00	2.00	1.00	2.00	2.00	1.00	1.40	1.40	1.00	1.40
g_i, Effective Green Time [s]	16	35	35	6	25	25	16	37	37	4	26
g / C, Green / Cycle	0.17	0.36	0.36	0.06	0.26	0.26	0.17	0.39	0.39	0.04	0.27
(v / s)_i Volume / Saturation Flow Rate	0.17	0.12	0.12	0.05	0.21	0.22	0.19	0.12	0.12	0.04	0.18
s, saturation flow rate [veh/h]	1597	1676	1598	1597	1676	1446	1597	1676	1403	1597	1648
c, Capacity [veh/h]	267	610	582	101	436	376	267	650	544	73	439
d1, Uniform Delay [s]	40.05	22.12	22.15	44.40	33.44	33.66	40.05	20.41	20.55	45.41	31.42
k, delay calibration	0.13	0.50	0.50	0.11	0.50	0.50	0.17	0.50	0.50	0.11	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	37.00	1.46	1.56	12.45	15.67	19.63	71.10	1.20	1.53	16.52	7.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

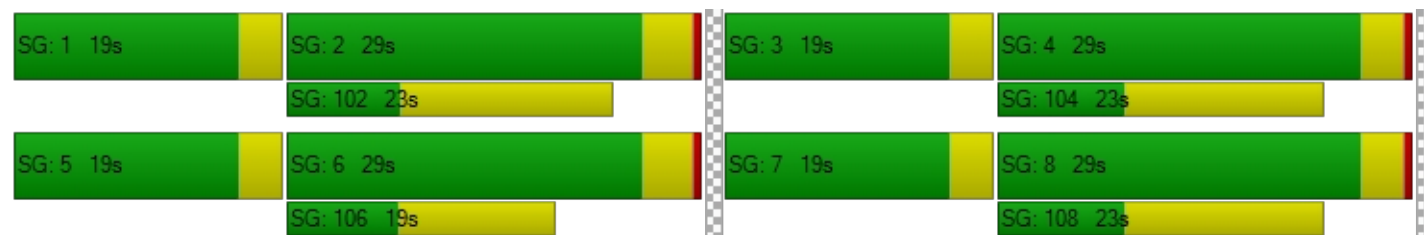
X, volume / capacity	1.03	0.33	0.34	0.78	0.82	0.84	1.12	0.30	0.32	0.78	0.66
d, Delay for Lane Group [s/veh]	77.05	23.58	23.71	56.85	49.10	53.29	111.14	21.61	22.08	61.93	39.08
Lane Group LOS	F	C	C	E	D	D	F	C	C	E	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh]	8.93	3.50	3.39	2.17	9.45	8.77	11.46	3.22	2.88	1.67	6.83
50th-Percentile Queue Length [ft]	223.34	87.58	84.78	54.23	236.26	219.18	286.46	80.41	72.09	41.75	170.83
95th-Percentile Queue Length [veh]	14.04	6.31	6.10	3.90	14.49	13.62	17.93	5.79	5.19	3.01	11.12
95th-Percentile Queue Length [ft]	350.98	157.64	152.60	97.61	362.30	340.57	448.37	144.73	129.77	75.15	278.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	77.05	23.64	23.71	56.85	49.76	53.29	111.14	21.61	22.08	61.93	39.08	39.08
Movement LOS	F	C	C	E	D	D	F	C	C	E	D	D
d_A, Approach Delay [s/veh]	45.43			51.67			61.75			42.82		
Approach LOS	D			D			E			D		
d_I, Intersection Delay [s/veh]	51.45											
Intersection LOS	D											
Intersection V/C	0.862											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 1: US 101 S Ramps/Dry Creek Rd

Control Type:	All-way stop	Delay (sec / veh):	29.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.972

Intersection Setup

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	275.00	100.00	100.00
Speed [mph]	30.00			55.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	0	0	0	108	0	24	0	181	151	602	258	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	9	0	63	8	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]	0	0	0	108	0	24	0	190	151	665	266	0
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]	0	0	0	27	0	6	0	48	38	166	67	0
Total Analysis Volume [veh/h]	0	0	0	108	0	24	0	190	151	665	266	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]		471	561	792	684	756
Degree of Utilization, x		0.23	0.04	0.43	0.97	0.35

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]		0.88	0.13	2.18	14.65	1.59
95th-Percentile Queue Length [ft]		21.88	3.35	54.58	366.13	39.68
Approach Delay [s/veh]	0.00	12.02		10.94	38.64	
Approach LOS	A	B		B	E	
Intersection Delay [s/veh]	29.41					
Intersection LOS	D					

Intersection Level Of Service Report

Intersection 2: US 101 N Ramps/Dry Creek Rd

Control Type:	Two-way stop	Delay (sec / veh):	117.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.185

Intersection Setup

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek 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	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek Road		
Base Volume Input [veh/h]	129	2	826	0	0	0	8	280	0	0	708	138
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	63	0	0	0	0	9	0	0	71	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]	129	2	889	0	0	0	8	289	0	0	779	138
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	1	222	0	0	0	2	72	0	0	195	35
Total Analysis Volume [veh/h]	129	2	889	0	0	0	8	289	0	0	779	138
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	2	0	0	0
Two-Stage Gap Acceptance	No			
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.75	0.01	1.19	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	71.78	71.25	117.00	0.00	0.00	0.00	9.89	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	F	F				A	A			A	A
95th-Percentile Queue Length [veh]	4.87	4.87	28.90	0.00	0.00	0.00	1.93	1.93	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	121.71	121.71	722.43	0.00	0.00	0.00	48.19	48.19	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	111.19			0.00			0.27			0.00		
Approach LOS	F			A			A			A		
d_I, Intersection Delay [s/veh]	50.80											
Intersection LOS	F											

Intersection Level Of Service Report

Intersection 4: Dry Creek Rd-March Ave/Healdsburg Ave

Control Type:	Signalized	Delay (sec / veh):	36.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.669

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	165.00	100.00	100.00	90.00	100.00	100.00	115.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	255	281	36	62	265	177	235	274	207	64	199	41
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	20	0	13	16	0	0	0	0	0	0	10
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
Right-Turn on Red Volume [veh/h]	0	0	16	0	0	46	0	0	91	0	0	12
Total Hourly Volume [veh/h]	255	301	20	75	281	131	235	274	116	64	199	39
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]	64	75	5	19	70	33	59	69	29	16	50	10
Total Analysis Volume [veh/h]	255	301	20	75	281	131	235	274	116	64	199	39
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	6			6			5			1		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	96
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	6	0	3	6	0	3	6	0	3	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.6	0.0	3.0	3.6	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0
Split [s]	19	29	0	19	29	0	19	29	0	19	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	8	0	0	8	0	0	9	0	0	9	0
Pedestrian Clearance [s]	0	15	0	0	11	0	0	14	0	0	14	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	2.0	0.0	1.0	2.0	0.0	1.0	1.4	0.0	1.0	1.4	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	96	96	96	96	96	96	96	96	96	96	96
L, Total Lost Time per Cycle [s]	3.00	4.00	4.00	3.00	4.00	4.00	3.00	3.40	3.40	3.00	3.40
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	2.00	2.00	1.00	2.00	2.00	1.00	1.40	1.40	1.00	1.40
g_i, Effective Green Time [s]	16	35	35	6	25	25	16	37	37	5	26
g / C, Green / Cycle	0.17	0.37	0.37	0.06	0.26	0.26	0.17	0.38	0.38	0.05	0.27
(v / s)_i Volume / Saturation Flow Rate	0.16	0.10	0.10	0.05	0.13	0.13	0.15	0.16	0.08	0.04	0.15
s, saturation flow rate [veh/h]	1597	1676	1640	1597	1676	1495	1597	1676	1418	1597	1623
c, Capacity [veh/h]	267	617	603	96	437	390	264	640	541	82	434
d1, Uniform Delay [s]	39.70	21.26	21.27	44.57	30.12	30.25	39.24	21.98	20.03	45.08	30.26
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	17.11	1.04	1.06	12.96	3.90	4.63	9.82	2.09	0.91	14.81	4.93
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

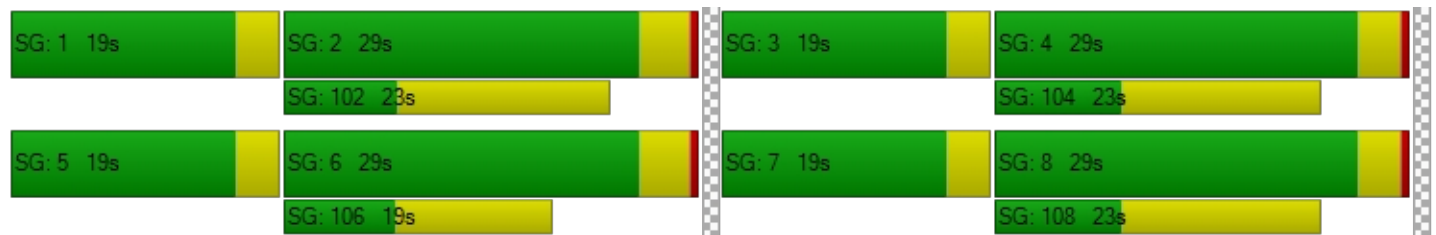
X, volume / capacity	0.96	0.26	0.26	0.78	0.49	0.51	0.89	0.43	0.21	0.78	0.55
d, Delay for Lane Group [s/veh]	56.81	22.30	22.33	57.53	34.02	34.89	49.06	24.08	20.93	59.89	35.19
Lane Group LOS	E	C	C	E	C	C	D	C	C	E	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh]	7.14	2.68	2.64	2.08	4.56	4.28	6.06	4.83	1.86	1.83	5.24
50th-Percentile Queue Length [ft]	178.48	67.04	65.96	51.88	114.07	106.93	151.62	120.74	46.39	45.84	131.06
95th-Percentile Queue Length [veh]	11.52	4.83	4.75	3.74	8.07	7.67	10.10	8.43	3.34	3.30	9.00
95th-Percentile Queue Length [ft]	288.03	120.68	118.72	93.39	201.65	191.73	252.59	210.84	83.50	82.51	224.94

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.81	22.31	22.33	57.53	34.22	34.89	49.06	24.08	20.93	59.89	35.19	35.19
Movement LOS	E	C	C	E	C	C	D	C	C	E	D	D
d_A, Approach Delay [s/veh]	37.58			37.99			32.89			40.42		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	36.64											
Intersection LOS	D											
Intersection V/C	0.669											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 1: US 101 S Ramps/Dry Creek Rd

Control Type:	All-way stop	Delay (sec / veh):	113.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.400

Intersection Setup

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	275.00	100.00	100.00
Speed [mph]	30.00			55.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 S On-Ramps			US 101 S Off-Ramps			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	0	0	0	133	1	38	0	245	189	854	222	0
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	10	0	91	11	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]	0	0	0	133	1	38	0	255	189	945	233	0
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]	0	0	0	33	0	10	0	64	47	236	58	0
Total Analysis Volume [veh/h]	0	0	0	133	1	38	0	255	189	945	233	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]		467	552	791	945	745
Degree of Utilization, x		0.29	0.07	0.56	1.40	0.31

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]		1.17	0.22	3.54	42.14	1.34
95th-Percentile Queue Length [ft]		29.35	5.52	88.59	1053.58	33.42
Approach Delay [s/veh]	0.00	12.65		13.20	166.35	
Approach LOS	A	B		B	F	
Intersection Delay [s/veh]	113.71					
Intersection LOS	F					

Intersection Level Of Service Report

Intersection 2: US 101 N Ramps/Dry Creek Rd

Control Type:	Two-way stop	Delay (sec / veh):	156.8
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.864

Intersection Setup

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek 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	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	US 101 N Off-Ramps			US 101 N On-Ramps			Dry Creek Rd			Dry Creek Road		
Base Volume Input [veh/h]	68	0	708	0	0	0	14	359	0	0	995	280
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	78	0	0	0	0	10	0	0	102	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]	68	0	786	0	0	0	14	369	0	0	1097	280
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]	17	0	197	0	0	0	4	92	0	0	274	70
Total Analysis Volume [veh/h]	68	0	786	0	0	0	14	369	0	0	1097	280
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	2	0	0	0
Two-Stage Gap Acceptance	No			
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.86	0.00	1.16	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	156.84	156.18	110.80	0.00	0.00	0.00	12.44	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	F	F				B	A			A	A
95th-Percentile Queue Length [veh]	4.42	4.42	25.32	0.00	0.00	0.00	6.79	6.79	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	110.58	110.58	633.03	0.00	0.00	0.00	169.69	169.69	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	114.47			0.00			0.45			0.00		
Approach LOS	F			A			A			A		
d_I, Intersection Delay [s/veh]	37.46											
Intersection LOS	F											

Intersection Level Of Service Report

Intersection 4: Dry Creek Rd-March Ave/Healdsburg Ave

Control Type:	Signalized	Delay (sec / veh):	52.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.886

Intersection Setup

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
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	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	165.00	100.00	100.00	90.00	100.00	100.00	115.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Healdsburg Ave			Healdsburg Ave			Dry Creek Rd			Dry Creek Rd		
Base Volume Input [veh/h]	275	352	59	79	424	302	299	197	255	57	263	43
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	0	17	30	0	0	0	0	0	0	17
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
Right-Turn on Red Volume [veh/h]	0	0	12	0	0	53	0	0	82	0	0	15
Total Hourly Volume [veh/h]	275	376	47	96	454	249	299	197	173	57	263	45
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]	69	94	12	24	114	62	75	49	43	14	66	11
Total Analysis Volume [veh/h]	275	376	47	96	454	249	299	197	173	57	263	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	4			2			7			2		
Bicycle Volume [bicycles/h]	1			2			1			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	96
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	6	0	3	6	0	3	6	0	3	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.6	0.0	3.0	3.6	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0
Split [s]	19	29	0	19	29	0	19	29	0	19	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	8	0	0	8	0	0	9	0	0	9	0
Pedestrian Clearance [s]	0	15	0	0	11	0	0	14	0	0	14	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	2.0	0.0	1.0	2.0	0.0	1.0	1.4	0.0	1.0	1.4	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	96	96	96	96	96	96	96	96	96	96	96
L, Total Lost Time per Cycle [s]	3.00	4.00	4.00	3.00	4.00	4.00	3.00	3.40	3.40	3.00	3.40
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	2.00	2.00	1.00	2.00	2.00	1.00	1.40	1.40	1.00	1.40
g_i, Effective Green Time [s]	16	34	34	7	25	25	16	37	37	4	26
g / C, Green / Cycle	0.17	0.35	0.35	0.08	0.26	0.26	0.17	0.39	0.39	0.04	0.27
(v / s)_i Volume / Saturation Flow Rate	0.17	0.13	0.13	0.06	0.22	0.23	0.19	0.12	0.12	0.04	0.19
s, saturation flow rate [veh/h]	1597	1676	1602	1597	1676	1454	1597	1676	1403	1597	1634
c, Capacity [veh/h]	267	589	563	121	436	378	267	650	544	73	435
d1, Uniform Delay [s]	40.05	23.21	23.24	43.68	33.83	34.04	40.05	20.41	20.55	45.41	31.88
k, delay calibration	0.13	0.50	0.50	0.11	0.50	0.50	0.17	0.50	0.50	0.11	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	37.00	1.75	1.86	10.96	18.82	23.18	71.10	1.20	1.53	16.52	9.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

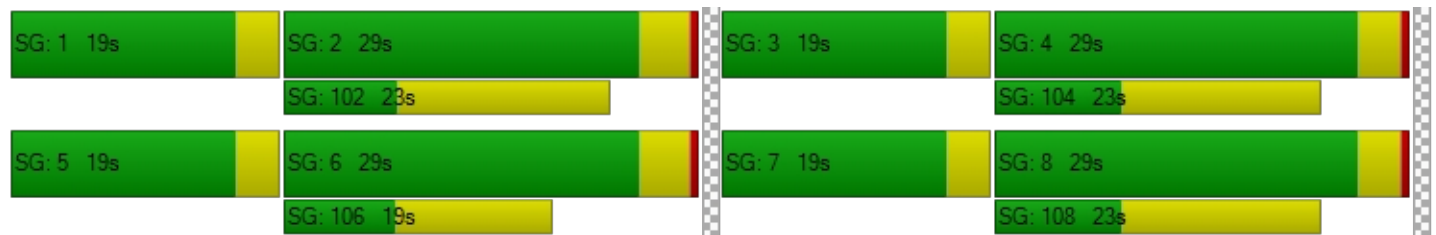
X, volume / capacity	1.03	0.37	0.37	0.79	0.85	0.87	1.12	0.30	0.32	0.78	0.71
d, Delay for Lane Group [s/veh]	77.05	24.96	25.10	54.64	52.65	57.22	111.14	21.61	22.08	61.93	41.22
Lane Group LOS	F	C	C	D	D	E	F	C	C	E	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh]	8.93	3.85	3.73	2.57	10.25	9.54	11.46	3.22	2.88	1.67	7.46
50th-Percentile Queue Length [ft]	223.34	96.18	93.25	64.29	256.29	238.54	286.46	80.41	72.09	41.75	186.60
95th-Percentile Queue Length [veh]	14.04	6.93	6.71	4.63	15.50	14.61	17.93	5.79	5.19	3.01	11.94
95th-Percentile Queue Length [ft]	350.98	173.13	167.85	115.72	387.56	365.19	448.37	144.73	129.77	75.15	298.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	77.05	25.02	25.10	54.64	53.47	57.22	111.14	21.61	22.08	61.93	41.22	41.22
Movement LOS	F	C	C	D	D	E	F	C	C	E	D	D
d_A, Approach Delay [s/veh]	45.52			54.78			61.75			44.46		
Approach LOS	D			D			E			D		
d_I, Intersection Delay [s/veh]	52.58											
Intersection LOS	D											
Intersection V/C	0.886											

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Appendix C: Air Quality-GHG-Energy Supporting Information

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CalEEMod Output, Construction Health Risk Assessment Calculations, and AERMOD Modeling Output

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North Entry Area Plan (NEAP) - Phase 1 Unmitigated Construction - Sonoma-North Coast County, Annual

North Entry Area Plan (NEAP) - Phase 1 Unmitigated Construction Sonoma-North Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	40.00	1000sqft	0.92	40,000.00	0
Other Asphalt Surfaces	3.39	Acre	3.39	147,668.40	0
Hotel	130.00	Room	3.00	130,000.00	0
Apartments Low Rise	290.00	Dwelling Unit	10.00	435,000.00	829
Strip Mall	30.00	1000sqft	0.69	30,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	75
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW/hr)	491.65	CH4 Intensity (lb/MW/hr)	0.022	N2O Intensity (lb/MW/hr)	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 3257.0023 North Entry Area Plan (NEAP) - Phase 1 Unmitigated Construction

Adjusted intensity factors based on Renewable Portfolio Standard

Land Use - Developable 18-acre area

Approximately 12 acres of open and undeveloped land to remain within the developable property

Construction Phase - Phase 1 would last 6 months and include the construction of internal circulation and access and utility infrastructure extensions and connections as well as site preparation within the 18-acre developable portion of the plan area.

Off-road Equipment - Estimated construction equipment

Grading - Site previously graded

Vehicle Trips - Construction run only

Woodstoves - Construction run only

Construction Off-road Equipment Mitigation - Compliance with BAAQMD best management practices threshold for fugitive dust; recommended measures from BAAQMD's Basic Construction Mitigation Measures Recommended for All Proposed Projects.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	66.00
tblConstructionPhase	NumDays	10.00	66.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberWood	101.50	0.00
tblLandUse	LandUseSquareFeet	188,760.00	130,000.00
tblLandUse	LandUseSquareFeet	290,000.00	435,000.00
tblLandUse	LotAcreage	4.33	3.00
tblLandUse	LotAcreage	18.13	10.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Site Preparation/Utility
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	491.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblVehicleTrips	ST_TR	7.16	7.32
tblVehicleTrips	ST_TR	2.46	9.74
tblVehicleTrips	ST_TR	8.19	8.36
tblVehicleTrips	ST_TR	42.04	44.32
tblVehicleTrips	SU_TR	6.07	7.32
tblVehicleTrips	SU_TR	1.05	9.74
tblVehicleTrips	SU_TR	5.95	8.36
tblVehicleTrips	SU_TR	20.43	44.32
tblVehicleTrips	WD_TR	6.59	7.32
tblVehicleTrips	WD_TR	11.03	9.74
tblVehicleTrips	WD_TR	8.17	8.36
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

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					
2019	0.2158	2.1408	1.3441	2.2100e-003	0.6053	0.1159	0.7212	0.3301	0.1067	0.4368	0.0000	198.9355	198.9355	0.0606	0.0000	200.4496
Maximum	0.2158	2.1408	1.3441	2.2100e-003	0.6053	0.1159	0.7212	0.3301	0.1067	0.4368	0.0000	198.9355	198.9355	0.0606	0.0000	200.4496

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					
2019	0.2158	2.1407	1.3440	2.2100e-003	0.2774	0.1159	0.3933	0.1499	0.1067	0.2566	0.0000	198.9352	198.9352	0.0606	0.0000	200.4493
Maximum	0.2158	2.1407	1.3440	2.2100e-003	0.2774	0.1159	0.3933	0.1499	0.1067	0.2566	0.0000	198.9352	198.9352	0.0606	0.0000	200.4493

	ROG	NOx	CO	SO2	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	54.18	0.00	45.47	54.60	0.00	41.26	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	7-1-2019	9-30-2019	1.7886	1.7886
		Highest	1.7886	1.7886

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation/Utility	Site Preparation	7/1/2019	9/30/2019	5	66	
2	Paving	Paving	10/1/2019	12/31/2019	5	66	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 3.39

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation/Utility	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation/Utility	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation/Utility	Trenchers	1	8.00	78	0.50
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

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
Site Preparation/Utility	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation/Utility - 2019

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					0.5962	0.0000	0.5962	0.3277	0.0000	0.3277	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1574	1.6332	0.8152	1.3700e-003		0.0887	0.0887		0.0816	0.0816	0.0000	122.7513	122.7513	0.0388	0.0000	123.7222
Total	0.1574	1.6332	0.8152	1.3700e-003	0.5962	0.0887	0.6849	0.3277	0.0816	0.4093	0.0000	122.7513	122.7513	0.0388	0.0000	123.7222

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4300e-003	2.5800e-003	0.0257	5.0000e-005	5.1800e-003	4.0000e-005	5.2200e-003	1.3800e-003	4.0000e-005	1.4200e-003	0.0000	4.9235	4.9235	2.0000e-004	0.0000	4.9285
Total	3.4300e-003	2.5800e-003	0.0257	5.0000e-005	5.1800e-003	4.0000e-005	5.2200e-003	1.3800e-003	4.0000e-005	1.4200e-003	0.0000	4.9235	4.9235	2.0000e-004	0.0000	4.9285

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					0.2683	0.0000	0.2683	0.1475	0.0000	0.1475	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1574	1.6332	0.8152	1.3700e-003		0.0887	0.0887		0.0816	0.0816	0.0000	122.7511	122.7511	0.0388	0.0000	123.7221
Total	0.1574	1.6332	0.8152	1.3700e-003	0.2683	0.0887	0.3569	0.1475	0.0816	0.2290	0.0000	122.7511	122.7511	0.0388	0.0000	123.7221

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4300e-003	2.5800e-003	0.0257	5.0000e-005	5.1800e-003	4.0000e-005	5.2200e-003	1.3800e-003	4.0000e-005	1.4200e-003	0.0000	4.9235	4.9235	2.0000e-004	0.0000	4.9285
Total	3.4300e-003	2.5800e-003	0.0257	5.0000e-005	5.1800e-003	4.0000e-005	5.2200e-003	1.3800e-003	4.0000e-005	1.4200e-003	0.0000	4.9235	4.9235	2.0000e-004	0.0000	4.9285

3.3 Paving - 2019

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	0.0480	0.5031	0.4839	7.5000e-004		0.0272	0.0272		0.0250	0.0250	0.0000	67.5681	67.5681	0.0214	0.0000	68.1026
Paving	4.4400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0524	0.5031	0.4839	7.5000e-004		0.0272	0.0272		0.0250	0.0250	0.0000	67.5681	67.5681	0.0214	0.0000	68.1026

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	2.5700e-003	1.9400e-003	0.0193	4.0000e-005	3.8800e-003	3.0000e-005	3.9200e-003	1.0300e-003	3.0000e-005	1.0600e-003	0.0000	3.6926	3.6926	1.5000e-004	0.0000	3.6964
Total	2.5700e-003	1.9400e-003	0.0193	4.0000e-005	3.8800e-003	3.0000e-005	3.9200e-003	1.0300e-003	3.0000e-005	1.0600e-003	0.0000	3.6926	3.6926	1.5000e-004	0.0000	3.6964

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	0.0480	0.5031	0.4839	7.5000e-004		0.0272	0.0272		0.0250	0.0250	0.0000	67.5680	67.5680	0.0214	0.0000	68.1025
Paving	4.4400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0524	0.5031	0.4839	7.5000e-004		0.0272	0.0272		0.0250	0.0250	0.0000	67.5680	67.5680	0.0214	0.0000	68.1025

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	2.5700e-003	1.9400e-003	0.0193	4.0000e-005	3.8800e-003	3.0000e-005	3.9200e-003	1.0300e-003	3.0000e-005	1.0600e-003	0.0000	3.6926	3.6926	1.5000e-004	0.0000	3.6964
Total	2.5700e-003	1.9400e-003	0.0193	4.0000e-005	3.8800e-003	3.0000e-005	3.9200e-003	1.0300e-003	3.0000e-005	1.0600e-003	0.0000	3.6926	3.6926	1.5000e-004	0.0000	3.6964

North Entry Area Plan (NEAP) - Unmitigated Phase 2 Construction - Sonoma-North Coast County, Annual

North Entry Area Plan (NEAP) - Unmitigated Phase 2 Construction Sonoma-North Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	40.00	1000sqft	0.92	40,000.00	0
Hotel	130.00	Room	3.00	130,000.00	0
Apartments Low Rise	290.00	Dwelling Unit	10.00	435,000.00	829
Strip Mall	30.00	1000sqft	0.69	30,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	75
Climate Zone	4			Operational Year	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	491.65	CH4 Intensity (lb/MW hr)	0.022	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 3257.0023 North Entry Area Plan (NEAP) - Unmitigated Phase 2 Construction

Adjusted intensity factors based on Renewable Portfolio Standard

Land Use - Developable 18-acre area

Approximately 12 acres of open and undeveloped land to remain within the developable property

Asphalt paving completed in Phase 1 construction

Construction Phase - It is anticipated that Phase 2 would last 24 months and would include the construction of the proposed buildings.

Vehicle Trips - Construction run only

Woodstoves - Construction run only

Construction Off-road Equipment Mitigation - Compliance with BAAQMD best management practices threshold for fugitive dust; recommended measures from BAAQMD's Basic Construction Mitigation Measures Recommended for All Proposed Projects.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	40.00
tblConstructionPhase	NumDays	300.00	463.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberWood	101.50	0.00
tblLandUse	LandUseSquareFeet	188,760.00	130,000.00
tblLandUse	LandUseSquareFeet	290,000.00	435,000.00
tblLandUse	LotAcreage	4.33	3.00
tblLandUse	LotAcreage	18.13	10.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	491.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

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					
2020	0.4893	3.6494	3.7661	8.7600e-003	0.3484	0.1541	0.5025	0.0940	0.1449	0.2389	0.0000	790.1283	790.1283	0.0972	0.0000	792.5578
2021	9.4835	2.7047	2.9664	7.0100e-003	0.2774	0.1086	0.3860	0.0748	0.1021	0.1769	0.0000	631.6487	631.6487	0.0798	0.0000	633.6445
Maximum	9.4835	3.6494	3.7661	8.7600e-003	0.3484	0.1541	0.5025	0.0940	0.1449	0.2389	0.0000	790.1283	790.1283	0.0972	0.0000	792.5578

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					
2020	0.4893	3.6494	3.7661	8.7600e-003	0.3484	0.1541	0.5025	0.0940	0.1449	0.2389	0.0000	790.1279	790.1279	0.0972	0.0000	792.5575
2021	9.4835	2.7047	2.9664	7.0100e-003	0.2774	0.1086	0.3860	0.0748	0.1021	0.1769	0.0000	631.6484	631.6484	0.0798	0.0000	633.6442
Maximum	9.4835	3.6494	3.7661	8.7600e-003	0.3484	0.1541	0.5025	0.0940	0.1449	0.2389	0.0000	790.1279	790.1279	0.0972	0.0000	792.5575

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2020	3-31-2020	1.0354	1.0354
2	4-1-2020	6-30-2020	1.0216	1.0216
3	7-1-2020	9-30-2020	1.0328	1.0328
4	10-1-2020	12-31-2020	1.0467	1.0467
5	1-1-2021	3-31-2021	0.9285	0.9285
6	4-1-2021	6-30-2021	0.9270	0.9270
7	7-1-2021	9-30-2021	0.9371	0.9371
		Highest	1.0467	1.0467

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	1/1/2020	10/8/2021	5	463	
2	Paving	Paving	10/9/2021	11/7/2021	5	20	
3	Architectural Coating	Architectural Coating	11/8/2021	12/31/2021	5	40	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 880,875; Residential Outdoor: 293,625; Non-Residential Indoor: 300,000; Non-Residential Outdoor: 100,000; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
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
Building Construction	9	286.00	64.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	57.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Building Construction - 2020

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	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4091	303.4091	0.0740	0.0000	305.2596
Total	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4091	303.4091	0.0740	0.0000	305.2596

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	0.0330	1.0061	0.2540	2.2400e-003	0.0544	5.3600e-003	0.0597	0.0157	5.1200e-003	0.0208	0.0000	215.8541	215.8541	0.0132	0.0000	216.1846
Worker	0.1786	0.1299	1.3049	3.0000e-003	0.2940	2.4000e-003	0.2964	0.0783	2.2100e-003	0.0805	0.0000	270.8652	270.8652	9.9400e-003	0.0000	271.1136
Total	0.2116	1.1360	1.5589	5.2400e-003	0.3484	7.7600e-003	0.3561	0.0940	7.3300e-003	0.1013	0.0000	486.7192	486.7192	0.0232	0.0000	487.2982

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	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4087	303.4087	0.0740	0.0000	305.2592
Total	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4087	303.4087	0.0740	0.0000	305.2592

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	0.0330	1.0061	0.2540	2.2400e-003	0.0544	5.3600e-003	0.0597	0.0157	5.1200e-003	0.0208	0.0000	215.8541	215.8541	0.0132	0.0000	216.1846
Worker	0.1786	0.1299	1.3049	3.0000e-003	0.2940	2.4000e-003	0.2964	0.0783	2.2100e-003	0.0805	0.0000	270.8652	270.8652	9.9400e-003	0.0000	271.1136
Total	0.2116	1.1360	1.5589	5.2400e-003	0.3484	7.7600e-003	0.3561	0.0940	7.3300e-003	0.1013	0.0000	486.7192	486.7192	0.0232	0.0000	487.2982

3.2 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1910	1.7519	1.6658	2.7100e-003		0.0963	0.0963		0.0906	0.0906	0.0000	232.7955	232.7955	0.0562	0.0000	234.1996
Total	0.1910	1.7519	1.6658	2.7100e-003		0.0963	0.0963		0.0906	0.0906	0.0000	232.7955	232.7955	0.0562	0.0000	234.1996

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	0.0204	0.7003	0.1715	1.7000e-003	0.0417	1.7600e-003	0.0435	0.0121	1.6800e-003	0.0137	0.0000	164.1071	164.1071	9.7500e-003	0.0000	164.3509
Worker	0.1271	0.0888	0.9056	2.2200e-003	0.2256	1.7600e-003	0.2273	0.0600	1.6300e-003	0.0617	0.0000	200.6125	200.6125	6.7900e-003	0.0000	200.7821
Total	0.1475	0.7891	1.0771	3.9200e-003	0.2673	3.5200e-003	0.2708	0.0721	3.3100e-003	0.0754	0.0000	364.7196	364.7196	0.0165	0.0000	365.1331

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	0.1910	1.7519	1.6658	2.7100e-003		0.0963	0.0963		0.0906	0.0906	0.0000	232.7952	232.7952	0.0562	0.0000	234.1993
Total	0.1910	1.7519	1.6658	2.7100e-003		0.0963	0.0963		0.0906	0.0906	0.0000	232.7952	232.7952	0.0562	0.0000	234.1993

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	0.0204	0.7003	0.1715	1.7000e-003	0.0417	1.7600e-003	0.0435	0.0121	1.6800e-003	0.0137	0.0000	164.1071	164.1071	9.7500e-003	0.0000	164.3509
Worker	0.1271	0.0888	0.9056	2.2200e-003	0.2256	1.7600e-003	0.2273	0.0600	1.6300e-003	0.0617	0.0000	200.6125	200.6125	6.7900e-003	0.0000	200.7821
Total	0.1475	0.7891	1.0771	3.9200e-003	0.2673	3.5200e-003	0.2708	0.0721	3.3100e-003	0.0754	0.0000	364.7196	364.7196	0.0165	0.0000	365.1331

3.3 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854

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	6.6000e-004	4.6000e-004	4.7300e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	1.0469	1.0469	4.0000e-005	0.0000	1.0478
Total	6.6000e-004	4.6000e-004	4.7300e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	1.0469	1.0469	4.0000e-005	0.0000	1.0478

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	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854

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	6.6000e-004	4.6000e-004	4.7300e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	1.0469	1.0469	4.0000e-005	0.0000	1.0478
Total	6.6000e-004	4.6000e-004	4.7300e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	1.0469	1.0469	4.0000e-005	0.0000	1.0478

3.4 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	9.1223					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3800e-003	0.0305	0.0364	6.0000e-005		1.8800e-003	1.8800e-003		1.8800e-003	1.8800e-003	0.0000	5.1065	5.1065	3.5000e-004	0.0000	5.1153
Total	9.1266	0.0305	0.0364	6.0000e-005		1.8800e-003	1.8800e-003		1.8800e-003	1.8800e-003	0.0000	5.1065	5.1065	3.5000e-004	0.0000	5.1153

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0400e-003	3.5200e-003	0.0359	9.0000e-005	8.9500e-003	7.0000e-005	9.0200e-003	2.3800e-003	6.0000e-005	2.4500e-003	0.0000	7.9567	7.9567	2.7000e-004	0.0000	7.9634
Total	5.0400e-003	3.5200e-003	0.0359	9.0000e-005	8.9500e-003	7.0000e-005	9.0200e-003	2.3800e-003	6.0000e-005	2.4500e-003	0.0000	7.9567	7.9567	2.7000e-004	0.0000	7.9634

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	9.1223					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3800e-003	0.0305	0.0364	6.0000e-005		1.8800e-003	1.8800e-003		1.8800e-003	1.8800e-003	0.0000	5.1065	5.1065	3.5000e-004	0.0000	5.1153
Total	9.1266	0.0305	0.0364	6.0000e-005		1.8800e-003	1.8800e-003		1.8800e-003	1.8800e-003	0.0000	5.1065	5.1065	3.5000e-004	0.0000	5.1153

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	5.0400e-003	3.5200e-003	0.0359	9.0000e-005	8.9500e-003	7.0000e-005	9.0200e-003	2.3800e-003	6.0000e-005	2.4500e-003	0.0000	7.9567	7.9567	2.7000e-004	0.0000	7.9634
Total	5.0400e-003	3.5200e-003	0.0359	9.0000e-005	8.9500e-003	7.0000e-005	9.0200e-003	2.3800e-003	6.0000e-005	2.4500e-003	0.0000	7.9567	7.9567	2.7000e-004	0.0000	7.9634

North Entry Area Plan (NEAP) Unmitigated Operations - Sonoma-North Coast County, Annual

North Entry Area Plan (NEAP) Unmitigated Operations

Sonoma-North Coast County, Annual

1.0 Project Characteristics**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	40.00	1000sqft	0.92	40,000.00	0
Other Asphalt Surfaces	3.39	Acre	3.39	147,668.40	0
Hotel	130.00	Room	3.00	130,000.00	0
Apartments Low Rise	290.00	Dwelling Unit	10.00	435,000.00	829
Strip Mall	30.00	1000sqft	0.69	30,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	75
Climate Zone	4			Operational Year	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	491.65	CH4 Intensity (lb/MW hr)	0.022	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 3257.0023 North Entry Area Plan (NEAP)

Adjusted intensity factors based on Renewable Portfolio Standard

Land Use - Developable 18-acre area

Approximately 12 acres of open and undeveloped land to remain within the developable property

Construction Phase - Operational run only

Off-road Equipment - Operational run only

Trips and VMT - Operational run only

Vehicle Trips - Trip generation rates based on the traffic analysis completed for the project by W-Trans (2018).

Woodstoves - Compliance with NSCAPCD Regulation IV

Water Mitigation - Compliance with Green Building Code Standards

Waste Mitigation - Statewide diversion/recycling mandate (11% percent reduction)

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	1.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberWood	101.50	0.00
tblLandUse	LandUseSquareFeet	188,760.00	130,000.00
tblLandUse	LandUseSquareFeet	290,000.00	435,000.00
tblLandUse	LotAcreage	4.33	3.00
tblLandUse	LotAcreage	18.13	10.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	491.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblTripsAndVMT	WorkerTripNumber	70.00	0.00
tblVehicleTrips	ST_TR	7.16	8.14
tblVehicleTrips	ST_TR	2.46	2.21
tblVehicleTrips	ST_TR	42.04	44.32
tblVehicleTrips	SU_TR	6.07	6.28
tblVehicleTrips	SU_TR	1.05	0.70
tblVehicleTrips	SU_TR	20.43	44.32
tblVehicleTrips	WD_TR	6.59	7.32
tblVehicleTrips	WD_TR	11.03	9.74
tblVehicleTrips	WD_TR	8.17	8.36
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.4852	0.1334	2.2060	8.1000e-004		0.0207	0.0207		0.0207	0.0207	0.0000	129.1511	129.1511	5.8300e-003	2.3000e-003	129.9831
Energy	0.0509	0.4542	0.3251	2.7800e-003		0.0352	0.0352		0.0352	0.0352	0.0000	1,236.6896	1,236.6896	0.0425	0.0167	1,242.7247
Mobile	1.5879	7.8812	17.5017	0.0510	4.0038	0.0533	4.0572	1.0775	0.0501	1.1276	0.0000	4,682.6542	4,682.6542	0.2112	0.0000	4,687.9332
Waste						0.0000	0.0000		0.0000	0.0000	55.4713	0.0000	55.4713	3.2783	0.0000	137.4279
Water						0.0000	0.0000		0.0000	0.0000	10.0011	52.0875	62.0886	1.0295	0.0248	95.2127
Total	5.1240	8.4688	20.0327	0.0546	4.0038	0.1092	4.1130	1.0775	0.1060	1.1835	65.4724	6,100.5825	6,166.0549	4.5672	0.0438	6,293.2816

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.4852	0.1334	2.2060	8.1000e-004		0.0207	0.0207		0.0207	0.0207	0.0000	129.1511	129.1511	5.8300e-003	2.3000e-003	129.9831
Energy	0.0509	0.4542	0.3251	2.7800e-003		0.0352	0.0352		0.0352	0.0352	0.0000	1,236.6896	1,236.6896	0.0425	0.0167	1,242.7247
Mobile	1.5879	7.8812	17.5017	0.0510	4.0038	0.0533	4.0572	1.0775	0.0501	1.1276	0.0000	4,682.6542	4,682.6542	0.2112	0.0000	4,687.9332
Waste						0.0000	0.0000		0.0000	0.0000	49.3695	0.0000	49.3695	2.9177	0.0000	122.3108
Water						0.0000	0.0000		0.0000	0.0000	8.0009	41.6700	49.6709	0.8236	0.0198	76.1702
Total	5.1240	8.4688	20.0327	0.0546	4.0038	0.1092	4.1130	1.0775	0.1060	1.1835	57.3704	6,090.1650	6,147.5353	4.0007	0.0388	6,259.1220

	ROG	NOx	CO	SO2	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	12.37	0.17	0.30	12.40	11.31	0.54

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	1.5879	7.8812	17.5017	0.0510	4.0038	0.0533	4.0572	1.0775	0.0501	1.1276	0.0000	4,682.6542	4,682.6542	0.2112	0.0000	4,687.9332
Unmitigated	1.5879	7.8812	17.5017	0.0510	4.0038	0.0533	4.0572	1.0775	0.0501	1.1276	0.0000	4,682.6542	4,682.6542	0.2112	0.0000	4,687.9332

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,122.80	2,360.60	1821.20	6,063,551	6,063,551
General Office Building	389.60	88.40	28.00	704,772	704,772
Hotel	1,086.80	1,064.70	773.50	1,973,811	1,973,811
Other Asphalt Surfaces	0.00	0.00	0.00		
Strip Mall	1,329.60	1,329.60	1329.60	2,047,628	2,047,628
Total	4,928.80	4,843.30	3,952.30	10,789,762	10,789,762

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
Apartments Low Rise	10.80	7.30	7.50	42.90	19.50	37.60	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.578299	0.039453	0.169996	0.109068	0.028307	0.006716	0.029274	0.026666	0.003071	0.001838	0.005325	0.000874	0.001112
General Office Building	0.578299	0.039453	0.169996	0.109068	0.028307	0.006716	0.029274	0.026666	0.003071	0.001838	0.005325	0.000874	0.001112
Hotel	0.578299	0.039453	0.169996	0.109068	0.028307	0.006716	0.029274	0.026666	0.003071	0.001838	0.005325	0.000874	0.001112
Other Asphalt Surfaces	0.578299	0.039453	0.169996	0.109068	0.028307	0.006716	0.029274	0.026666	0.003071	0.001838	0.005325	0.000874	0.001112
Strip Mall	0.578299	0.039453	0.169996	0.109068	0.028307	0.006716	0.029274	0.026666	0.003071	0.001838	0.005325	0.000874	0.001112

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	732.7289	732.7289	0.0328	7.4500e-003	735.7693
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	732.7289	732.7289	0.0328	7.4500e-003	735.7693
NaturalGas Mitigated	0.0509	0.4542	0.3251	2.7800e-003		0.0352	0.0352		0.0352	0.0352	0.0000	503.9607	503.9607	9.6600e-003	9.2400e-003	506.9555
NaturalGas Unmitigated	0.0509	0.4542	0.3251	2.7800e-003		0.0352	0.0352		0.0352	0.0352	0.0000	503.9607	503.9607	9.6600e-003	9.2400e-003	506.9555

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					
Apartments Low Rise	2.95767e+006	0.0160	0.1363	0.0580	8.7000e-004		0.0110	0.0110		0.0110	0.0110	0.0000	157.8324	157.8324	3.0300e-003	2.8900e-003	158.7703
General Office Building	654800	3.5300e-003	0.0321	0.0270	1.9000e-004		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003	0.0000	34.9426	34.9426	6.7000e-004	6.4000e-004	35.1503
Hotel	5.7603e+006	0.0311	0.2824	0.2372	1.6900e-003		0.0215	0.0215		0.0215	0.0215	0.0000	307.3915	307.3915	5.8900e-003	5.6400e-003	309.2182
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
Strip Mall	71100	3.8000e-004	3.4900e-003	2.9300e-003	2.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	3.7942	3.7942	7.0000e-005	7.0000e-005	3.8167
Total		0.0509	0.4542	0.3251	2.7700e-003		0.0352	0.0352		0.0352	0.0352	0.0000	503.9607	503.9607	9.6600e-003	9.2400e-003	506.9555

Mitigated

	Natural Gas 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					
Apartments Low Rise	2.95767e+006	0.0160	0.1363	0.0580	8.7000e-004		0.0110	0.0110		0.0110	0.0110	0.0000	157.8324	157.8324	3.0300e-003	2.8900e-003	158.7703
General Office Building	654800	3.5300e-003	0.0321	0.0270	1.9000e-004		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003	0.0000	34.9426	34.9426	6.7000e-004	6.4000e-004	35.1503
Hotel	5.7603e+006	0.0311	0.2824	0.2372	1.6900e-003		0.0215	0.0215		0.0215	0.0215	0.0000	307.3915	307.3915	5.8900e-003	5.6400e-003	309.2182
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
Strip Mall	71100	3.8000e-004	3.4900e-003	2.9300e-003	2.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	3.7942	3.7942	7.0000e-005	7.0000e-005	3.8167
Total		0.0509	0.4542	0.3251	2.7700e-003		0.0352	0.0352		0.0352	0.0352	0.0000	503.9607	503.9607	9.6600e-003	9.2400e-003	506.9555

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.26115e+006	281.2479	0.0126	2.8600e-003	282.4148
General Office Building	713200	159.0498	7.1200e-003	1.6200e-003	159.7097
Hotel	990600	220.9124	9.8900e-003	2.2500e-003	221.8290
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	320700	71.5189	3.2000e-003	7.3000e-004	71.8156
Total		732.7290	0.0328	7.4600e-003	735.7693

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.26115e+006	281.2479	0.0126	2.8600e-003	282.4148
General Office Building	713200	159.0498	7.1200e-003	1.6200e-003	159.7097
Hotel	990600	220.9124	9.8900e-003	2.2500e-003	221.8290
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	320700	71.5189	3.2000e-003	7.3000e-004	71.8156
Total		732.7290	0.0328	7.4600e-003	735.7693

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.4852	0.1334	2.2060	8.1000e-004		0.0207	0.0207		0.0207	0.0207	0.0000	129.1511	129.1511	5.8300e-003	2.3000e-003	129.9831
Unmitigated	3.4852	0.1334	2.2060	8.1000e-004		0.0207	0.0207		0.0207	0.0207	0.0000	129.1511	129.1511	5.8300e-003	2.3000e-003	129.9831

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	0.9174					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.4895					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0127	0.1085	0.0462	6.9000e-004		8.7700e-003	8.7700e-003		8.7700e-003	8.7700e-003	0.0000	125.6301	125.6301	2.4100e-003	2.3000e-003	126.3767
Landscaping	0.0656	0.0249	2.1598	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5210	3.5210	3.4200e-003	0.0000	3.6064
Total	3.4852	0.1334	2.2060	8.0000e-004		0.0207	0.0207		0.0207	0.0207	0.0000	129.1511	129.1511	5.8300e-003	2.3000e-003	129.9831

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	0.9174					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.4895					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0127	0.1085	0.0462	6.9000e-004		8.7700e-003	8.7700e-003		8.7700e-003	8.7700e-003	0.0000	125.6301	125.6301	2.4100e-003	2.3000e-003	126.3767
Landscaping	0.0656	0.0249	2.1598	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5210	3.5210	3.4200e-003	0.0000	3.6064
Total	3.4852	0.1334	2.2060	8.0000e-004		0.0207	0.0207		0.0207	0.0207	0.0000	129.1511	129.1511	5.8300e-003	2.3000e-003	129.9831

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	49.6709	0.8236	0.0198	76.1702
Unmitigated	62.0886	1.0295	0.0248	95.2127

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	18.8947 / 11.9119	38.0922	0.6171	0.0149	57.9496
General Office Building	7.10935 / 4.35734	14.2354	0.2322	5.5900e-003	21.7066
Hotel	3.29768 / 0.366409	5.3115	0.1077	2.5800e-003	8.7717
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	2.22218 / 1.36198	4.4496	0.0726	1.7500e-003	6.7848
Total		62.0886	1.0295	0.0248	95.2127

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	15.1157 / 9.52948	30.4737	0.4937	0.0119	46.3597
General Office Building	5.68748 / 3.48587	11.3883	0.1858	4.4700e-003	17.3653
Hotel	2.63814 / 0.293127	4.2492	0.0861	2.0600e-003	7.0173
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	1.77774 / 1.08958	3.5597	0.0581	1.4000e-003	5.4279
Total		49.6709	0.8236	0.0198	76.1702

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	49.3695	2.9177	0.0000	122.3108
Unmitigated	55.4713	3.2783	0.0000	137.4279

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	133.4	27.0790	1.6003	0.0000	67.0871
General Office Building	37.2	7.5513	0.4463	0.0000	18.7079
Hotel	71.17	14.4469	0.8538	0.0000	35.7915
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	31.5	6.3942	0.3779	0.0000	15.8414
Total		55.4713	3.2783	0.0000	137.4279

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	118.726	24.1003	1.4243	0.0000	59.7075
General Office Building	33.108	6.7206	0.3972	0.0000	16.6501
Hotel	63.3413	12.8577	0.7599	0.0000	31.8544
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	28.035	5.6909	0.3363	0.0000	14.0988
Total		49.3695	2.9177	0.0000	122.3108

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

North Entry Area Plan (NEAP) Unmitigated Operations - Sonoma-North Coast County, Summer

North Entry Area Plan (NEAP) Unmitigated Operations

Sonoma-North Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	40.00	1000sqft	0.92	40,000.00	0
Other Asphalt Surfaces	3.39	Acre	3.39	147,668.40	0
Hotel	130.00	Room	3.00	130,000.00	0
Apartments Low Rise	290.00	Dwelling Unit	10.00	435,000.00	829
Strip Mall	30.00	1000sqft	0.69	30,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	75
Climate Zone	4			Operational Year	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW/hr)	491.65	CH4 Intensity (lb/MW/hr)	0.022	N2O Intensity (lb/MW/hr)	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 3257.0023 North Entry Area Plan (NEAP)

Adjusted intensity factors based on Renewable Portfolio Standard

Land Use - Developable 18-acre area

Approximately 12 acres of open and undeveloped land to remain within the developable property

Construction Phase - Operational run only

Off-road Equipment - Operational run only

Trips and VMT - Operational run only

Vehicle Trips - Trip generation rates based on the traffic analysis completed for the project by W-Trans (2018).

Woodstoves - Compliance with NSCAPCD Regulation IV

Water Mitigation - Compliance with Green Building Code Standards

Waste Mitigation - Statewide diversion/recycling mandate (11% percent reduction)

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	1.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberWood	101.50	0.00
tblLandUse	LandUseSquareFeet	188,760.00	130,000.00
tblLandUse	LandUseSquareFeet	290,000.00	435,000.00
tblLandUse	LotAcreage	4.33	3.00
tblLandUse	LotAcreage	18.13	10.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	491.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblTripsAndVMT	WorkerTripNumber	70.00	0.00
tblVehicleTrips	ST_TR	7.16	8.14
tblVehicleTrips	ST_TR	2.46	2.21
tblVehicleTrips	ST_TR	42.04	44.32
tblVehicleTrips	SU_TR	6.07	6.28
tblVehicleTrips	SU_TR	1.05	0.70
tblVehicleTrips	SU_TR	20.43	44.32
tblVehicleTrips	WD_TR	6.59	7.32
tblVehicleTrips	WD_TR	11.03	9.74
tblVehicleTrips	WD_TR	8.17	8.36
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	19.7060	2.9228	25.1241	0.0182		0.3462	0.3462		0.3462	0.3462	0.0000	3,420.7717	3,420.7717	0.1066	0.0619	3,441.8901
Energy	0.2790	2.4890	1.7812	0.0152		0.1928	0.1928		0.1928	0.1928		3,043.9538	3,043.9538	0.0583	0.0558	3,062.0424
Mobile	10.6185	45.7164	106.4453	0.3212	25.1924	0.3194	25.5118	6.7539	0.2999	7.0538		32,503.2037	32,503.2037	1.3953		32,538.0858
Total	30.6035	51.1282	133.3506	0.3545	25.1924	0.8583	26.0507	6.7539	0.8389	7.5928	0.0000	38,967.9292	38,967.9292	1.5602	0.1177	39,042.0183

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	19.7060	2.9228	25.1241	0.0182		0.3462	0.3462		0.3462	0.3462	0.0000	3,420.7717	3,420.7717	0.1066	0.0619	3,441.8901
Energy	0.2790	2.4890	1.7812	0.0152		0.1928	0.1928		0.1928	0.1928		3,043.9538	3,043.9538	0.0583	0.0558	3,062.0424
Mobile	10.6185	45.7164	106.4453	0.3212	25.1924	0.3194	25.5118	6.7539	0.2999	7.0538		32,503.2037	32,503.2037	1.3953		32,538.0858
Total	30.6035	51.1282	133.3506	0.3545	25.1924	0.8583	26.0507	6.7539	0.8389	7.5928	0.0000	38,967.9292	38,967.9292	1.5602	0.1177	39,042.0183

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

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	10.6185	45.7164	106.4453	0.3212	25.1924	0.3194	25.5118	6.7539	0.2999	7.0538		32,503.20 37	32,503.203 7	1.3953		32,538.08 58
Unmitigated	10.6185	45.7164	106.4453	0.3212	25.1924	0.3194	25.5118	6.7539	0.2999	7.0538		32,503.20 37	32,503.203 7	1.3953		32,538.08 58

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT		Annual VMT	
Apartments Low Rise	2,122.80	2,360.60	1821.20	6,063,551		6,063,551	
General Office Building	389.60	88.40	28.00	704,772		704,772	
Hotel	1,086.80	1,064.70	773.50	1,973,811		1,973,811	
Other Asphalt Surfaces	0.00	0.00	0.00				
Strip Mall	1,329.60	1,329.60	1329.60	2,047,628		2,047,628	
Total	4,928.80	4,843.30	3,952.30	10,789,762		10,789,762	

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
Apartments Low Rise	10.80	7.30	7.50	42.90	19.50	37.60	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.578299	0.039453	0.169996	0.109068	0.028307	0.006716	0.029274	0.026666	0.003071	0.001838	0.005325	0.000874	0.001112
General Office Building	0.578299	0.039453	0.169996	0.109068	0.028307	0.006716	0.029274	0.026666	0.003071	0.001838	0.005325	0.000874	0.001112
Hotel	0.578299	0.039453	0.169996	0.109068	0.028307	0.006716	0.029274	0.026666	0.003071	0.001838	0.005325	0.000874	0.001112
Other Asphalt Surfaces	0.578299	0.039453	0.169996	0.109068	0.028307	0.006716	0.029274	0.026666	0.003071	0.001838	0.005325	0.000874	0.001112
Strip Mall	0.578299	0.039453	0.169996	0.109068	0.028307	0.006716	0.029274	0.026666	0.003071	0.001838	0.005325	0.000874	0.001112

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	0.2790	2.4890	1.7812	0.0152		0.1928	0.1928		0.1928	0.1928		3,043.9538	3,043.9538	0.0583	0.0558	3,062.0424
NaturalGas Unmitigated	0.2790	2.4890	1.7812	0.0152		0.1928	0.1928		0.1928	0.1928		3,043.9538	3,043.9538	0.0583	0.0558	3,062.0424

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					
Apartments Low Rise	8103.2	0.0874	0.7468	0.3178	4.7700e-003		0.0604	0.0604		0.0604	0.0604		953.3172	953.3172	0.0183	0.0175	958.9823
General Office Building	1793.97	0.0194	0.1759	0.1477	1.0600e-003		0.0134	0.0134		0.0134	0.0134		211.0556	211.0556	4.0500e-003	3.8700e-003	212.3098
Hotel	15781.6	0.1702	1.5472	1.2997	9.2800e-003		0.1176	0.1176		0.1176	0.1176		1,856.6640	1,856.6640	0.0356	0.0340	1,867.6972
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
Strip Mall	194.795	2.1000e-003	0.0191	0.0160	1.1000e-004		1.4500e-003	1.4500e-003		1.4500e-003	1.4500e-003		22.9170	22.9170	4.4000e-004	4.2000e-004	23.0532
Total		0.2790	2.4890	1.7812	0.0152		0.1928	0.1928		0.1928	0.1928		3,043.9537	3,043.9537	0.0584	0.0558	3,062.0425

Mitigated

	Natural Gas 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					
Apartments Low Rise	8.1032	0.0874	0.7468	0.3178	4.7700e-003		0.0604	0.0604		0.0604	0.0604		953.3172	953.3172	0.0183	0.0175	958.9823
General Office Building	1.79397	0.0194	0.1759	0.1477	1.0600e-003		0.0134	0.0134		0.0134	0.0134		211.0556	211.0556	4.0500e-003	3.8700e-003	212.3098
Hotel	15.7816	0.1702	1.5472	1.2997	9.2800e-003		0.1176	0.1176		0.1176	0.1176		1,856.6640	1,856.6640	0.0356	0.0340	1,867.6972
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
Strip Mall	0.194795	2.1000e-003	0.0191	0.0160	1.1000e-004		1.4500e-003	1.4500e-003		1.4500e-003	1.4500e-003		22.9170	22.9170	4.4000e-004	4.2000e-004	23.0532
Total		0.2790	2.4890	1.7812	0.0152		0.1928	0.1928		0.1928	0.1928		3,043.9537	3,043.9537	0.0584	0.0558	3,062.0425

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive 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	19.7060	2.9228	25.1241	0.0182		0.3462	0.3462		0.3462	0.3462	0.0000	3,420.7717	3,420.7717	0.1066	0.0619	3,441.8901
Unmitigated	19.7060	2.9228	25.1241	0.0182		0.3462	0.3462		0.3462	0.3462	0.0000	3,420.7717	3,420.7717	0.1066	0.0619	3,441.8901

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	5.0266					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	13.6413					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3096	2.6458	1.1259	0.0169		0.2139	0.2139		0.2139	0.2139	0.0000	3,377.6471	3,377.6471	0.0647	0.0619	3,397.7187
Landscaping	0.7284	0.2770	23.9982	1.2600e-003		0.1322	0.1322		0.1322	0.1322		43.1247	43.1247	0.0419		44.1713
Total	19.7060	2.9228	25.1241	0.0182		0.3462	0.3462		0.3462	0.3462	0.0000	3,420.7718	3,420.7718	0.1066	0.0619	3,441.8901

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	5.0266					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	13.6413					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3096	2.6458	1.1259	0.0169		0.2139	0.2139		0.2139	0.2139	0.0000	3,377.6471	3,377.6471	0.0647	0.0619	3,397.7187
Landscaping	0.7284	0.2770	23.9982	1.2600e-003		0.1322	0.1322		0.1322	0.1322		43.1247	43.1247	0.0419		44.1713
Total	19.7060	2.9228	25.1241	0.0182		0.3462	0.3462		0.3462	0.3462	0.0000	3,420.7718	3,420.7718	0.1066	0.0619	3,441.8901

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

North Entry Area Plan (NEAP) Unmitigated Operations - Sonoma-North Coast County, Winter

North Entry Area Plan (NEAP) Unmitigated Operations

Sonoma-North Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	40.00	1000sqft	0.92	40,000.00	0
Other Asphalt Surfaces	3.39	Acre	3.39	147,668.40	0
Hotel	130.00	Room	3.00	130,000.00	0
Apartments Low Rise	290.00	Dwelling Unit	10.00	435,000.00	829
Strip Mall	30.00	1000sqft	0.69	30,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	75
Climate Zone	4			Operational Year	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	491.65	CH4 Intensity (lb/MW hr)	0.022	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 3257.0023 North Entry Area Plan (NEAP)

Adjusted intensity factors based on Renewable Portfolio Standard

Land Use - Developable 18-acre area

Approximately 12 acres of open and undeveloped land to remain within the developable property

Construction Phase - Operational run only

Off-road Equipment - Operational run only

Trips and VMT - Operational run only

Vehicle Trips - Trip generation rates based on the traffic analysis completed for the project by W-Trans (2018).

Woodstoves - Compliance with NSCAPCD Regulation IV

Water Mitigation - Compliance with Green Building Code Standards

Waste Mitigation - Statewide diversion/recycling mandate (11% percent reduction)

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	1.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberWood	101.50	0.00
tblLandUse	LandUseSquareFeet	188,760.00	130,000.00
tblLandUse	LandUseSquareFeet	290,000.00	435,000.00
tblLandUse	LotAcreage	4.33	3.00
tblLandUse	LotAcreage	18.13	10.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	491.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblTripsAndVMT	WorkerTripNumber	70.00	0.00
tblVehicleTrips	ST_TR	7.16	8.14
tblVehicleTrips	ST_TR	2.46	2.21
tblVehicleTrips	ST_TR	42.04	44.32
tblVehicleTrips	SU_TR	6.07	6.28
tblVehicleTrips	SU_TR	1.05	0.70
tblVehicleTrips	SU_TR	20.43	44.32
tblVehicleTrips	WD_TR	6.59	7.32
tblVehicleTrips	WD_TR	11.03	9.74
tblVehicleTrips	WD_TR	8.17	8.36
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	19.7060	2.9228	25.1241	0.0182		0.3462	0.3462		0.3462	0.3462	0.0000	3,420.7717	3,420.7717	0.1066	0.0619	3,441.8901
Energy	0.2790	2.4890	1.7812	0.0152		0.1928	0.1928		0.1928	0.1928		3,043.9538	3,043.9538	0.0583	0.0558	3,062.0424
Mobile	9.4402	48.2754	110.3665	0.3037	25.1924	0.3229	25.5153	6.7539	0.3033	7.0572		30,733.8863	30,733.8863	1.4328		30,769.7065
Total	29.4252	53.6871	137.2718	0.3370	25.1924	0.8618	26.0542	6.7539	0.8422	7.5961	0.0000	37,198.6118	37,198.6118	1.5978	0.1177	37,273.6390

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	19.7060	2.9228	25.1241	0.0182		0.3462	0.3462		0.3462	0.3462	0.0000	3,420.7717	3,420.7717	0.1066	0.0619	3,441.8901
Energy	0.2790	2.4890	1.7812	0.0152		0.1928	0.1928		0.1928	0.1928		3,043.9538	3,043.9538	0.0583	0.0558	3,062.0424
Mobile	9.4402	48.2754	110.3665	0.3037	25.1924	0.3229	25.5153	6.7539	0.3033	7.0572		30,733.8863	30,733.8863	1.4328		30,769.7065
Total	29.4252	53.6871	137.2718	0.3370	25.1924	0.8618	26.0542	6.7539	0.8422	7.5961	0.0000	37,198.6118	37,198.6118	1.5978	0.1177	37,273.6390

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

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	9.4402	48.2754	110.3665	0.3037	25.1924	0.3229	25.5153	6.7539	0.3033	7.0572		30,733.8863	30,733.8863	1.4328		30,769.7065
Unmitigated	9.4402	48.2754	110.3665	0.3037	25.1924	0.3229	25.5153	6.7539	0.3033	7.0572		30,733.8863	30,733.8863	1.4328		30,769.7065

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,122.80	2,360.60	1821.20	6,063,551	6,063,551
General Office Building	389.60	88.40	28.00	704,772	704,772
Hotel	1,086.80	1,064.70	773.50	1,973,811	1,973,811
Other Asphalt Surfaces	0.00	0.00	0.00		
Strip Mall	1,329.60	1,329.60	1329.60	2,047,628	2,047,628
Total	4,928.80	4,843.30	3,952.30	10,789,762	10,789,762

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
Apartments Low Rise	10.80	7.30	7.50	42.90	19.50	37.60	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.578299	0.039453	0.169996	0.109068	0.028307	0.006716	0.029274	0.026666	0.003071	0.001838	0.005325	0.000874	0.001112
General Office Building	0.578299	0.039453	0.169996	0.109068	0.028307	0.006716	0.029274	0.026666	0.003071	0.001838	0.005325	0.000874	0.001112
Hotel	0.578299	0.039453	0.169996	0.109068	0.028307	0.006716	0.029274	0.026666	0.003071	0.001838	0.005325	0.000874	0.001112
Other Asphalt Surfaces	0.578299	0.039453	0.169996	0.109068	0.028307	0.006716	0.029274	0.026666	0.003071	0.001838	0.005325	0.000874	0.001112
Strip Mall	0.578299	0.039453	0.169996	0.109068	0.028307	0.006716	0.029274	0.026666	0.003071	0.001838	0.005325	0.000874	0.001112

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	0.2790	2.4890	1.7812	0.0152		0.1928	0.1928		0.1928	0.1928		3,043.9538	3,043.9538	0.0583	0.0558	3,062.0424
NaturalGas Unmitigated	0.2790	2.4890	1.7812	0.0152		0.1928	0.1928		0.1928	0.1928		3,043.9538	3,043.9538	0.0583	0.0558	3,062.0424

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					
Apartments Low Rise	8103.2	0.0874	0.7468	0.3178	4.7700e-003		0.0604	0.0604		0.0604	0.0604		953.3172	953.3172	0.0183	0.0175	958.9823
General Office Building	1793.97	0.0194	0.1759	0.1477	1.0600e-003		0.0134	0.0134		0.0134	0.0134		211.0556	211.0556	4.0500e-003	3.8700e-003	212.3098
Hotel	15781.6	0.1702	1.5472	1.2997	9.2800e-003		0.1176	0.1176		0.1176	0.1176		1,856.6640	1,856.6640	0.0356	0.0340	1,867.6972
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
Strip Mall	194.795	2.1000e-003	0.0191	0.0160	1.1000e-004		1.4500e-003	1.4500e-003		1.4500e-003	1.4500e-003		22.9170	22.9170	4.4000e-004	4.2000e-004	23.0532
Total		0.2790	2.4890	1.7812	0.0152		0.1928	0.1928		0.1928	0.1928		3,043.9537	3,043.9537	0.0584	0.0558	3,062.0425

Mitigated

	Natural Gas 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					
Apartments Low Rise	8.1032	0.0874	0.7468	0.3178	4.7700e-003		0.0604	0.0604		0.0604	0.0604		953.3172	953.3172	0.0183	0.0175	958.9823
General Office Building	1.79397	0.0194	0.1759	0.1477	1.0600e-003		0.0134	0.0134		0.0134	0.0134		211.0556	211.0556	4.0500e-003	3.8700e-003	212.3098
Hotel	15.7816	0.1702	1.5472	1.2997	9.2800e-003		0.1176	0.1176		0.1176	0.1176		1,856.6640	1,856.6640	0.0356	0.0340	1,867.6972
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
Strip Mall	0.194795	2.1000e-003	0.0191	0.0160	1.1000e-004		1.4500e-003	1.4500e-003		1.4500e-003	1.4500e-003		22.9170	22.9170	4.4000e-004	4.2000e-004	23.0532
Total		0.2790	2.4890	1.7812	0.0152		0.1928	0.1928		0.1928	0.1928		3,043.9537	3,043.9537	0.0584	0.0558	3,062.0425

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive 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	19.7060	2.9228	25.1241	0.0182		0.3462	0.3462		0.3462	0.3462	0.0000	3,420.7717	3,420.7717	0.1066	0.0619	3,441.8901
Unmitigated	19.7060	2.9228	25.1241	0.0182		0.3462	0.3462		0.3462	0.3462	0.0000	3,420.771	3,420.7717	0.1066	0.0619	3,441.890

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	5.0266					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	13.6413					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3096	2.6458	1.1259	0.0169		0.2139	0.2139		0.2139	0.2139	0.0000	3,377.6471	3,377.6471	0.0647	0.0619	3,397.7187
Landscaping	0.7284	0.2770	23.9982	1.2600e-003		0.1322	0.1322		0.1322	0.1322		43.1247	43.1247	0.0419		44.1713
Total	19.7060	2.9228	25.1241	0.0182		0.3462	0.3462		0.3462	0.3462	0.0000	3,420.7718	3,420.7718	0.1066	0.0619	3,441.8901

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	5.0266					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	13.6413					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3096	2.6458	1.1259	0.0169		0.2139	0.2139		0.2139	0.2139	0.0000	3,377.6471	3,377.6471	0.0647	0.0619	3,397.7187
Landscaping	0.7284	0.2770	23.9982	1.2600e-003		0.1322	0.1322		0.1322	0.1322		43.1247	43.1247	0.0419		44.1713
Total	19.7060	2.9228	25.1241	0.0182		0.3462	0.3462		0.3462	0.3462	0.0000	3,420.7718	3,420.7718	0.1066	0.0619	3,441.8901

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

North Entry Area Plan (NEAP) Mitigated Operations - Sonoma-North Coast County, Annual

North Entry Area Plan (NEAP) Mitigated Operations

Sonoma-North Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	40.00	1000sqft	0.92	40,000.00	0
Other Asphalt Surfaces	3.39	Acre	3.39	147,668.40	0
Hotel	130.00	Room	3.00	130,000.00	0
Apartments Low Rise	290.00	Dwelling Unit	10.00	435,000.00	829
Strip Mall	30.00	1000sqft	0.69	30,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	75
Climate Zone	4			Operational Year	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	491.65	CH4 Intensity (lb/MW hr)	0.022	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 3257.0023 North Entry Area Plan (NEAP)
Adjusted intensity factors based on Renewable Portfolio Standard

Land Use - Developable 18-acre area

Approximately 12 acres of open and undeveloped land to remain within the developable property

Construction Phase - Operational run only

Off-road Equipment - Operational run only

Trips and VMT - Operational run only

Vehicle Trips - Trip generation rates based on the traffic analysis completed for the project by W-Trans (2018).

Woodstoves - Compliance with NSCAPCD Regulation IV

Energy Mitigation - Renewable electricity

Water Mitigation - Compliance with Green Building Code Standards

Waste Mitigation - Statewide diversion/recycling mandate (11% percent reduction)

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	1.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberWood	101.50	0.00
tblLandUse	LandUseSquareFeet	188,760.00	130,000.00
tblLandUse	LandUseSquareFeet	290,000.00	435,000.00
tblLandUse	LotAcreage	4.33	3.00
tblLandUse	LotAcreage	18.13	10.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	491.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblTripsAndVMT	WorkerTripNumber	70.00	0.00
tblVehicleTrips	ST_TR	7.16	8.14
tblVehicleTrips	ST_TR	2.46	2.21
tblVehicleTrips	ST_TR	42.04	44.32
tblVehicleTrips	SU_TR	6.07	6.28
tblVehicleTrips	SU_TR	1.05	0.70
tblVehicleTrips	SU_TR	20.43	44.32
tblVehicleTrips	WD_TR	6.59	7.32
tblVehicleTrips	WD_TR	11.03	9.74
tblVehicleTrips	WD_TR	8.17	8.36
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.4852	0.1334	2.2060	8.1000e-004		0.0207	0.0207		0.0207	0.0207	0.0000	129.1511	129.1511	5.8300e-003	2.3000e-003	129.9831
Energy	0.0509	0.4542	0.3251	2.7800e-003		0.0352	0.0352		0.0352	0.0352	0.0000	1,236.6896	1,236.6896	0.0425	0.0167	1,242.7247
Mobile	1.5879	7.8812	17.5017	0.0510	4.0038	0.0533	4.0572	1.0775	0.0501	1.1276	0.0000	4,682.6542	4,682.6542	0.2112	0.0000	4,687.9332
Waste						0.0000	0.0000		0.0000	0.0000	55.4713	0.0000	55.4713	3.2783	0.0000	137.4279
Water						0.0000	0.0000		0.0000	0.0000	10.0011	52.0875	62.0886	1.0295	0.0248	95.2127
Total	5.1240	8.4688	20.0327	0.0546	4.0038	0.1092	4.1130	1.0775	0.1060	1.1835	65.4724	6,100.5825	6,166.0549	4.5672	0.0438	6,293.2816

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.4852	0.1334	2.2060	8.1000e-004		0.0207	0.0207		0.0207	0.0207	0.0000	129.1511	129.1511	5.8300e-003	2.3000e-003	129.9831
Energy	0.0509	0.4542	0.3251	2.7800e-003		0.0352	0.0352		0.0352	0.0352	0.0000	503.9607	503.9607	9.6600e-003	9.2400e-003	506.9555
Mobile	1.5694	7.7294	17.0840	0.0494	3.8679	0.0518	3.9196	1.0410	0.0486	1.0896	0.0000	4,534.0419	4,534.0419	0.2062	0.0000	4,539.1978
Waste						0.0000	0.0000		0.0000	0.0000	49.3695	0.0000	49.3695	2.9177	0.0000	122.3108
Water						0.0000	0.0000		0.0000	0.0000	8.0009	41.6700	49.6709	0.8236	0.0198	76.1702
Total	5.1054	8.3170	19.6151	0.0530	3.8679	0.1076	3.9755	1.0410	0.1045	1.1454	57.3704	5,208.8237	5,266.1941	3.9630	0.0314	5,374.6174

	ROG	NOx	CO	SO2	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	0.36	1.79	2.09	2.97	3.39	1.46	3.34	3.39	1.42	3.22	12.37	14.62	14.59	13.23	28.33	14.60

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Implement Trip Reduction Program

	ROG	NOx	CO	SO2	Fugitive 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	1.5694	7.7294	17.0840	0.0494	3.8679	0.0518	3.9196	1.0410	0.0486	1.0896	0.0000	4,534.0419	4,534.0419	0.2062	0.0000	4,539.1978
Unmitigated	1.5879	7.8812	17.5017	0.0510	4.0038	0.0533	4.0572	1.0775	0.0501	1.1276	0.0000	4,682.6542	4,682.6542	0.2112	0.0000	4,687.9332

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,122.80	2,360.60	1821.20	6,063,551	5,898,989
General Office Building	389.60	88.40	28.00	704,772	674,458
Hotel	1,086.80	1,064.70	773.50	1,973,811	1,889,598
Other Asphalt Surfaces	0.00	0.00	0.00		
Strip Mall	1,329.60	1,329.60	1329.60	2,047,628	1,960,421
Total	4,928.80	4,843.30	3,952.30	10,789,762	10,423,466

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
Apartments Low Rise	10.80	7.30	7.50	42.90	19.50	37.60	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.578299	0.039453	0.169996	0.109068	0.028307	0.006716	0.029274	0.026666	0.003071	0.001838	0.005325	0.000874	0.001112
General Office Building	0.578299	0.039453	0.169996	0.109068	0.028307	0.006716	0.029274	0.026666	0.003071	0.001838	0.005325	0.000874	0.001112
Hotel	0.578299	0.039453	0.169996	0.109068	0.028307	0.006716	0.029274	0.026666	0.003071	0.001838	0.005325	0.000874	0.001112
Other Asphalt Surfaces	0.578299	0.039453	0.169996	0.109068	0.028307	0.006716	0.029274	0.026666	0.003071	0.001838	0.005325	0.000874	0.001112
Strip Mall	0.578299	0.039453	0.169996	0.109068	0.028307	0.006716	0.029274	0.026666	0.003071	0.001838	0.005325	0.000874	0.001112

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable 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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	732.7289	732.7289	0.0328	7.4500e-003	735.7693
NaturalGas Mitigated	0.0509	0.4542	0.3251	2.7800e-003		0.0352	0.0352		0.0352	0.0352	0.0000	503.9607	503.9607	9.6600e-003	9.2400e-003	506.9555
NaturalGas Unmitigated	0.0509	0.4542	0.3251	2.7800e-003		0.0352	0.0352		0.0352	0.0352	0.0000	503.9607	503.9607	9.6600e-003	9.2400e-003	506.9555

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					
Apartments Low Rise	2.95767e+006	0.0160	0.1363	0.0580	8.7000e-004		0.0110	0.0110		0.0110	0.0110	0.0000	157.8324	157.8324	3.0300e-003	2.8900e-003	158.7703
General Office Building	654800	3.5300e-003	0.0321	0.0270	1.9000e-004		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003	0.0000	34.9426	34.9426	6.7000e-004	6.4000e-004	35.1503
Hotel	5.7603e+006	0.0311	0.2824	0.2372	1.6900e-003		0.0215	0.0215		0.0215	0.0215	0.0000	307.3915	307.3915	5.8900e-003	5.6400e-003	309.2182
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
Strip Mall	71100	3.8000e-004	3.4900e-003	2.9300e-003	2.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	3.7942	3.7942	7.0000e-005	7.0000e-005	3.8167
Total		0.0509	0.4542	0.3251	2.7700e-003		0.0352	0.0352		0.0352	0.0352	0.0000	503.9607	503.9607	9.6600e-003	9.2400e-003	506.9555

Mitigated

	Natural Gas 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					
Apartments Low Rise	2.95767e+006	0.0160	0.1363	0.0580	8.7000e-004		0.0110	0.0110		0.0110	0.0110	0.0000	157.8324	157.8324	3.0300e-003	2.8900e-003	158.7703
General Office Building	654800	3.5300e-003	0.0321	0.0270	1.9000e-004		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003	0.0000	34.9426	34.9426	6.7000e-004	6.4000e-004	35.1503
Hotel	5.7603e+006	0.0311	0.2824	0.2372	1.6900e-003		0.0215	0.0215		0.0215	0.0215	0.0000	307.3915	307.3915	5.8900e-003	5.6400e-003	309.2182
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
Strip Mall	71100	3.8000e-004	3.4900e-003	2.9300e-003	2.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	3.7942	3.7942	7.0000e-005	7.0000e-005	3.8167
Total		0.0509	0.4542	0.3251	2.7700e-003		0.0352	0.0352		0.0352	0.0352	0.0000	503.9607	503.9607	9.6600e-003	9.2400e-003	506.9555

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.26115e+006	281.2479	0.0126	2.8600e-003	282.4148
General Office Building	713200	159.0498	7.1200e-003	1.6200e-003	159.7097
Hotel	990600	220.9124	9.8900e-003	2.2500e-003	221.8290
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	320700	71.5189	3.2000e-003	7.3000e-004	71.8156
Total		732.7290	0.0328	7.4600e-003	735.7693

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Hotel	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.4852	0.1334	2.2060	8.1000e-004		0.0207	0.0207		0.0207	0.0207	0.0000	129.1511	129.1511	5.8300e-003	2.3000e-003	129.9831
Unmitigated	3.4852	0.1334	2.2060	8.1000e-004		0.0207	0.0207		0.0207	0.0207	0.0000	129.1511	129.1511	5.8300e-003	2.3000e-003	129.9831

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	0.9174					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.4895					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0127	0.1085	0.0462	6.9000e-004		8.7700e-003	8.7700e-003		8.7700e-003	8.7700e-003	0.0000	125.6301	125.6301	2.4100e-003	2.3000e-003	126.3767
Landscaping	0.0656	0.0249	2.1598	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5210	3.5210	3.4200e-003	0.0000	3.6064
Total	3.4852	0.1334	2.2060	8.0000e-004		0.0207	0.0207		0.0207	0.0207	0.0000	129.1511	129.1511	5.8300e-003	2.3000e-003	129.9831

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	0.9174					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.4895					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0127	0.1085	0.0462	6.9000e-004		8.7700e-003	8.7700e-003		8.7700e-003	8.7700e-003	0.0000	125.6301	125.6301	2.4100e-003	2.3000e-003	126.3767
Landscaping	0.0656	0.0249	2.1598	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5210	3.5210	3.4200e-003	0.0000	3.6064
Total	3.4852	0.1334	2.2060	8.0000e-004		0.0207	0.0207		0.0207	0.0207	0.0000	129.1511	129.1511	5.8300e-003	2.3000e-003	129.9831

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	49.6709	0.8236	0.0198	76.1702
Unmitigated	62.0886	1.0295	0.0248	95.2127

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	18.8947 / 11.9119	38.0922	0.6171	0.0149	57.9496
General Office Building	7.10935 / 4.35734	14.2354	0.2322	5.5900e-003	21.7066
Hotel	3.29768 / 0.366409	5.3115	0.1077	2.5800e-003	8.7717
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	2.22218 / 1.36198	4.4496	0.0726	1.7500e-003	6.7848
Total		62.0886	1.0295	0.0248	95.2127

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	15.1157 / 9.52948	30.4737	0.4937	0.0119	46.3597
General Office Building	5.68748 / 3.48587	11.3883	0.1858	4.4700e-003	17.3653
Hotel	2.63814 / 0.293127	4.2492	0.0861	2.0600e-003	7.0173
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	1.77774 / 1.08958	3.5597	0.0581	1.4000e-003	5.4279
Total		49.6709	0.8236	0.0198	76.1702

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	49.3695	2.9177	0.0000	122.3108
Unmitigated	55.4713	3.2783	0.0000	137.4279

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	133.4	27.0790	1.6003	0.0000	67.0871
General Office Building	37.2	7.5513	0.4463	0.0000	18.7079
Hotel	71.17	14.4469	0.8538	0.0000	35.7915
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	31.5	6.3942	0.3779	0.0000	15.8414
Total		55.4713	3.2783	0.0000	137.4279

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	118.726	24.1003	1.4243	0.0000	59.7075
General Office Building	33.108	6.7206	0.3972	0.0000	16.6501
Hotel	63.3413	12.8577	0.7599	0.0000	31.8544
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	28.035	5.6909	0.3363	0.0000	14.0988
Total		49.3695	2.9177	0.0000	122.3108

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

North Entry Area Plan Project

Unmitigated

Construction Annual DPM Emissions (as PM2.5 Exhaust)

Construction Schedule

2019
8 hours/day
5 days/week
26.4 weeks/year
1056 hours/year
132 working days starting 7/1/2019

Onsite Construction Area Source Size (m2): 143,942.0 from AERMOD

Onsite Construction PM2.5 Emissions

2019		Onsite	Onsite	Onsite DPM
	Construction Activity	Annual DPM	Annual DPM	Source
		Emissions	Emissions	Emissions
		(tons/year)	(g/sec)	(g/m2-sec)
	Site Preparation	8.160E-02	1.949E-02	1.354E-07
	Paving	2.500E-02	5.971E-03	4.148E-08
	Total	1.066E-01	2.546E-02	1.769E-07

Offsite Construction Vehicle PM2.5 Emissions

2019		Offsite Hauling	Offsite Vendor	Offsite Workers
		Annual DPM	Annual DPM	Annual DPM
	Construction Activity	Emissions	Emissions	Emissions
		(tons/year)	(tons/year)	(tons/year)
	Site Preparation	0.000E+00	0.000E+00	4.000E-05
	Paving	0.000E+00	0.000E+00	3.000E-05
	Total (tons/year)	0.000E+00	0.000E+00	7.000E-05

Trip Distance assumed in CalEEMod (mi) 20.0 7.3 10.8

Offsite Project Trip Distance Along Roadway Segment

North on Healdsburg Avenue to US-101 (mi) 0.90 0.90 0.90
South on Healdsburg Avenue to US-101 (mi) 0.68 0.68 0.68

Offsite Project Emissions Along Roadway Segment

North on Healdsburg Avenue to US-101 (tons/year) 0.000E+00 0.000E+00 2.925E-06
South on Healdsburg Avenue to US-101 (tons/year) 0.000E+00 0.000E+00 2.198E-06

Total Offsite Emissions Along Segments (tons/year)

0.000E+00 0.000E+00 5.124E-06

Offsite Emissions Along Roadway Segments Analyzed

North Road Segment Total Offsite Exhaust Emissions (tons/year) 2.925E-06
North Road Segment Total Offsite Project Exhaust Emissions (grams/sec) 6.987E-07
South Road Segment Total Offsite Project Exhaust Emissions (tons/year) 2.198E-06
South Road Segment Total Offsite Project Exhaust Emissions (grams/sec) 5.250E-07
Total Offsite Project Exhaust Emissions (tons/year) 5.124E-06
Total Offsite Project Exhaust Emissions (grams/sec) 1.224E-06

Onsite Exhaust Emissions (tons/year) 1.066E-01
Total Onsite Emissions (tons/year) 1.066E-01
Onsite Exhaust Emissions (g/m2-sec) 1.769E-07

Total PM@2.5 Exhaust (tons/year) 1.066E-01

North Entry Area Plan Project

Unmitigated

Construction Annual DPM Emissions (as PM2.5 Exhaust)

Construction Schedule

2020

8 hours/day
5 days/week
52.4 weeks/year
2096 hours/year

262 working days in 2020

Onsite Construction Area Source Size (m2):

143,942.0

from AERMOD

Onsite Construction PM2.5 Emissions

2020		Onsite	Onsite	Onsite DPM
	Construction Activity	Annual DPM	Annual DPM	Source
		Emissions	Emissions	Emissions
		(tons/year)	(g/sec)	(g/m2-sec)
	Building Construction (2020)	1.376E-01	1.656E-02	1.150E-07
	Total	1.376E-01	1.656E-02	1.150E-07

Offsite Construction Vehicle PM2.5 Emissions

2020		Offsite Hauling	Offsite Vendor	Offsite Workers
	Construction Activity	Annual DPM	Annual DPM	Annual DPM
		Emissions	Emissions	Emissions
		(tons/year)	(tons/year)	(tons/year)
	Building Construction (2020)	0.000E+00	5.120E-03	2.210E-03
	Total (tons/year)	0.000E+00	5.120E-03	2.210E-03

7.330E-03

Trip Distance assumed in CalEEMod (mi) 20.0 7.3 10.8

Offsite Project Trip Distance Along Roadway Segment

North on Healdsburg Avenue to US-101 (mi) 0.90 0.90 0.90
South on Healdsburg Avenue to US-101 (mi) 0.68 0.68 0.68

Offsite Project Emissions Along Roadway Segment

North on Healdsburg Avenue to US-101 (tons/year) 0.000E+00 3.166E-04 9.236E-05
South on Healdsburg Avenue to US-101 (tons/year) 0.000E+00 2.379E-04 6.940E-05
Total Offsite Emissions Along Segments (tons/year) **0.000E+00** **5.544E-04** **1.618E-04**

Offsite Emissions Along Roadway Segment Analyzed

North Road Segment Total Offsite Project Exhaust Emissions (tons/year) 4.089E-04
North Road Segment Total Offsite Project Exhaust Emissions (grams/sec) 4.921E-05
South Road Segment Total Offsite Project Exhaust Emissions (tons/year) 3.073E-04
South Road Segment Total Offsite Project Exhaust Emissions (grams/sec) 3.697E-05
Total Offsite Project Exhaust Emissions (tons/year) 7.162E-04
Total Offsite Project Exhaust Emissions (grams/sec) 8.618E-05

Onsite Exhaust Emissions (tons/year) 1.376E-01
Total Onsite Emissions (tons/year) 1.376E-01
Onsite Exhaust Emissions (g/m2-sec) 1.150E-07

Total PM@2.5 Exhaust (tons/year) **1.383E-01**

North Entry Area Plan Project

Unmitigated

Construction Annual DPM Emissions (as PM2.5 Exhaust)

Construction Schedule

2021

8 hours/day
5 days/week
52.2 weeks/year
2088 hours/year

261 working days in 2021

Onsite Construction Area Source Size (m2):

143,942.0

from AERMOD

Onsite Construction PM2.5 Emissions

2021		Onsite	Onsite	Onsite DPM
	Construction Activity	Annual DPM	Annual DPM	Source
		Emissions	Emissions	Emissions
		(tons/year)	(g/sec)	(g/m2-sec)
	Building Construction (2021)	9.060E-02	1.094E-02	7.603E-08
	Paving	6.240E-03	7.538E-04	5.237E-09
	Architectural Coating	1.880E-03	2.271E-04	1.578E-09
	Total	9.872E-02	1.192E-02	8.285E-08

Offsite Construction Vehicle PM2.5 Emissions

2021		Offsite Hauling	Offsite Vendor	Offsite Workers
	Construction Activity	Annual DPM	Annual DPM	Annual DPM
		Emissions	Emissions	Emissions
		(tons/year)	(tons/year)	(tons/year)
	Building Construction (2021)	0.000E+00	1.680E-03	1.630E-03
	Paving	0.000E+00	0.000E+00	1.000E-05
	Architectural Coating	0.000E+00	0.000E+00	6.000E-05
	Total (tons/year)	0.000E+00	1.680E-03	1.700E-03

3.380E-03

Trip Distance assumed in CalEEMod (mi) 20.0 7.3 10.8

Offsite Project Trip Distance Along Roadway Segment

North on Healdsburg Avenue to US-101 (mi) 0.90 0.90 0.90
South on Healdsburg Avenue to US-101 (mi) 0.68 0.68 0.68

Offsite Project Emissions Along Roadway Segment

North on Healdsburg Avenue to US-101 (tons/year) 0.000E+00 1.039E-04 7.105E-05
South on Healdsburg Avenue to US-101 (tons/year) 0.000E+00 7.805E-05 5.338E-05

Total Offsite Emissions Along Segments (tons/year) **0.000E+00** **1.819E-04** **1.244E-04**

Offsite Emissions Along Roadway Segment Analyzed

North Road Segment Total Offsite Project Exhaust Emissions (tons/year) 1.749E-04
North Road Segment Total Offsite Project Exhaust Emissions (grams/sec) 2.113E-05
South Road Segment Total Offsite Project Exhaust Emissions (tons/year) 1.314E-04
South Road Segment Total Offsite Project Exhaust Emissions (grams/sec) 1.588E-05
Total Offsite Project Exhaust Emissions (tons/year) 3.064E-04
Total Offsite Project Exhaust Emissions (grams/sec) 3.701E-05

Onsite Exhaust Emissions (tons/year) 9.872E-02
Total Onsite Emissions (tons/year) 9.872E-02
Onsite Exhaust Emissions (g/m2-sec) 8.285E-08

Total PM@2.5 Exhaust (tons/year) **9.903E-02**

North Entry Area Plan Project

2019

No Mitigation at Sensitive Receptors

Construction Annual DPM Emissions (as PM2.5 Exhaust)

Annual Average Onsite DPM Exhaust Emission Rate (grams/m2/sec): 1.76884E-07

Annual Average Offsite DPM Exhaust Emission Rate - North Road Segment (grams/sec): 6.98733E-07

Annual Average Offsite DPM Exhaust Emission Rate - South Road Segment (grams/sec): 5.25023E-07

X (m)	Y (m)	Onsite	Onsite	Offsite North Road Segment	Offsite North Road Segment	Offsite South Road Segment	Offsite South Road Segment	Total DPM (ug/m3)
		Annual DPM Exhaust w/Unit Emissions (ug/m3)	Annual DPM Exhaust w/Actual Emissions (ug/m3)	Annual DPM Exhaust w/Unit Emissions (ug/m3)	Annual DPM Exhaust w/Actual Emissions (ug/m3)	Annual DPM Exhaust w/Unit Emissions (ug/m3)	Annual DPM Exhaust w/Actual Emissions (ug/m3)	
511141.17	4277077.82	143983.886	0.02547	0.10570	7.38561E-08	3.61480	1.89785E-06	0.02547
511177.3	4277063.56	136457.4435	0.02414	0.12313	8.60350E-08	2.21847	1.16475E-06	0.02414
511115.23	4277044.7	103975.2279	0.01839	0.08728	6.09854E-08	4.28994	2.25232E-06	0.01839
511127.93	4277027.53	97231.93682	0.01720	0.08936	6.24388E-08	3.28742	1.72597E-06	0.01720
511112.48	4276990.1	72604.83919	0.01284	0.07821	5.46479E-08	3.46104	1.81713E-06	0.01284
511152.66	4277006.58	93009.69074	0.01645	0.09637	6.73369E-08	2.25686	1.18490E-06	0.01645
511185.29	4276993.19	92931.53969	0.01644	0.10786	7.53653E-08	1.59504	8.37433E-07	0.01644
511245.73	4277021.01	107435.162	0.01900	0.14969	1.04593E-07	1.13766	5.97298E-07	0.01900
511278.7	4277033.03	108845.3984	0.01925	0.18097	1.26450E-07	0.95695	5.02421E-07	0.01925
511308.58	4277036.12	105295.8119	0.01863	0.20876	1.45867E-07	0.79668	4.18276E-07	0.01863
511319.91	4277044.7	106378.1768	0.01882	0.22776	1.59143E-07	0.75252	3.95091E-07	0.01882
511336.05	4277053.98	106408.4588	0.01882	0.25484	1.78065E-07	0.68436	3.59305E-07	0.01882
511350.3	4277017.64	92493.80929	0.01636	0.22730	1.58822E-07	0.58893	3.09202E-07	0.01636
511371.36	4277040.35	94945.63707	0.01679	0.27084	1.89245E-07	0.52655	2.76451E-07	0.01679
511359.18	4277004.82	87778.85979	0.01553	0.22212	1.55203E-07	0.54667	2.87014E-07	0.01553
511380.24	4277027.53	89879.00693	0.01590	0.26205	1.83103E-07	0.49100	2.57786E-07	0.01590
511370.17	4276993.1	83365.94118	0.01475	0.21948	1.53358E-07	0.50372	2.64465E-07	0.01475
511391.78	4277015.07	84842.8157	0.01501	0.25569	1.78659E-07	0.45199	2.37305E-07	0.01501
511417.05	4277042.36	85822.77667	0.01518	0.30058	2.10025E-07	0.39442	2.07080E-07	0.01518
511377.68	4276982.47	79967.90391	0.01415	0.21522	1.50381E-07	0.47617	2.50000E-07	0.01415
511400.94	4277005	81099.08236	0.01435	0.25031	1.74900E-07	0.42455	2.22899E-07	0.01435
511412.84	4276995.66	77289.28017	0.01367	0.24678	1.72433E-07	0.39383	2.06770E-07	0.01367
511437.57	4277020.75	77445.41324	0.01370	0.28104	1.96372E-07	0.34754	1.82467E-07	0.01370
511426.67	4277032.47	81781.97923	0.01447	0.29152	2.03695E-07	0.37124	1.94910E-07	0.01447
511447.91	4277011.04	73902.85569	0.01307	0.27302	1.90768E-07	0.32709	1.71730E-07	0.01307
511458.35	4276998.96	70224.72977	0.01242	0.26299	1.83760E-07	0.30813	1.61775E-07	0.01242
511467.33	4276989.25	67391.86781	0.01192	0.25546	1.78498E-07	0.29293	1.53795E-07	0.01192
511477.22	4276977.16	64273.83517	0.01137	0.24638	1.72154E-07	0.27761	1.45752E-07	0.01137
511488.57	4276969.65	61680.44219	0.01091	0.24158	1.68800E-07	0.26185	1.37477E-07	0.01091
511498.09	4276955.18	58721.04041	0.01039	0.23157	1.61806E-07	0.24954	1.31014E-07	0.01039
511388.39	4276972.03	76385.135	0.01351	0.21301	1.48837E-07	0.44313	2.32654E-07	0.01351
511399.38	4276962.14	73074.91722	0.01293	0.21101	1.47440E-07	0.41336	2.17024E-07	0.01293
511400.53	4278315.27	31520.27527	0.00558	2.07337	1.44873E-06	0.06912	3.62896E-08	0.00558
511340.62	4278311.18	34958.6277	0.00618	5.39671	3.77086E-06	0.07837	4.11461E-08	0.00619
511345.14	4278296.52	35942.99635	0.00636	5.28159	3.69042E-06	0.07891	4.14296E-08	0.00636
511364.54	4278312.47	33720.90116	0.00596	3.42120	2.39050E-06	0.07473	3.92350E-08	0.00597
511209.12	4276947.27	78040.32853	0.01380	0.10628	7.42613E-08	1.17553	6.17181E-07	0.01380
511176.13	4276927.62	66485.68848	0.01176	0.09037	6.31445E-08	1.45589	7.64376E-07	0.01176
511219.65	4276925.86	72609.36368	0.01284	0.10489	7.32901E-08	1.03479	5.43289E-07	0.01284
511196.49	4276892.17	60574.16495	0.01071	0.09036	6.31375E-08	1.13906	5.98033E-07	0.01072
511003.4	4276731.86	17485.25777	0.00309	0.04183	2.92280E-08	10.36559	5.44218E-06	0.00310
510998.1	4276717.84	16641.23692	0.00294	0.04082	2.85223E-08	11.09401	5.82461E-06	0.00295
511028.47	4276724.85	18832.09233	0.00333	0.04393	3.06953E-08	5.45369	2.86331E-06	0.00333
511051.99	4276724.69	20504.85085	0.00363	0.04636	3.23933E-08	3.62046	1.90083E-06	0.00363
511131.57	4276736.84	28773.53077	0.00509	0.05827	4.07152E-08	1.43418	7.52978E-07	0.00509
511001.84	4276671.43	15298.95685	0.00271	0.03941	2.75371E-08	7.70438	4.04498E-06	0.00271
511001.84	4276650.09	14660.14888	0.00259	0.03862	2.69851E-08	6.91395	3.62998E-06	0.00260
511020.22	4276632.96	14965.76141	0.00265	0.03930	2.74602E-08	4.41557	2.31828E-06	0.00265
511038.75	4276665.82	17128.83818	0.00303	0.04241	2.96333E-08	3.65875	1.92093E-06	0.00303
511039.53	4276636.23	16131.45345	0.00285	0.04126	2.88297E-08	3.28189	1.72307E-06	0.00286

511082.2	4276682.64	20780.84991	0.00368	0.04799	3.35322E-08	2.12660	1.11651E-06	0.00368
511107.74	4276673.92	22370.66526	0.00396	0.05082	3.55096E-08	1.56697	8.22696E-07	0.00396
511082.67	4276634.05	18746.68195	0.00332	0.04586	3.20439E-08	1.84176	9.66967E-07	0.00332
511110.54	4276628.29	20320.80244	0.00359	0.04863	3.39794E-08	1.35728	7.12604E-07	0.00360
511127.99	4276630.94	21621.53405	0.00382	0.05063	3.53768E-08	1.16489	6.11594E-07	0.00383
511125.03	4276675.95	23930.36538	0.00423	0.05318	3.71586E-08	1.32193	6.94044E-07	0.00423
511144.81	4276679.06	25818.26761	0.00457	0.05587	3.90382E-08	1.10849	5.81983E-07	0.00457
511150.72	4276637.95	23579.15768	0.00417	0.05340	3.73123E-08	0.97630	5.12580E-07	0.00417
511169.1	4276687.47	28507.89733	0.00504	0.05940	4.15047E-08	0.91319	4.79446E-07	0.00504
511171.75	4276641.37	25220.86774	0.00446	0.05566	3.88915E-08	0.83989	4.40962E-07	0.00446
510972.24	4276568.62	11568.08874	0.00205	0.03388	2.36731E-08	9.54637	5.01207E-06	0.00205
510970.09	4276558.27	11298.68078	0.00200	0.03343	2.33586E-08	9.54705	5.01242E-06	0.00200
510968.79	4276547.92	11077.3509	0.00196	0.03307	2.31071E-08	9.43642	4.95434E-06	0.00196
510965.99	4276537.57	10821.04958	0.00191	0.03263	2.27996E-08	9.71816	5.10226E-06	0.00192
510988.84	4276570.99	12157.67891	0.00215	0.03494	2.44137E-08	6.39917	3.35971E-06	0.00215
510985.39	4276561.72	11847.34955	0.00210	0.03443	2.40574E-08	6.63621	3.48416E-06	0.00210
511025.27	4276572.93	13512.5005	0.00239	0.03746	2.61745E-08	3.34471	1.75605E-06	0.00239
511039.72	4276569.26	14102.822	0.00249	0.03867	2.70200E-08	2.70022	1.41768E-06	0.00250
511021.39	4276549	12778.73034	0.00226	0.03635	2.53989E-08	3.29799	1.73152E-06	0.00226
511014.5	4276530.03	12131.16781	0.00215	0.03528	2.46513E-08	3.46454	1.81896E-06	0.00215
511041.66	4276545.12	13560.36389	0.00240	0.03798	2.65379E-08	2.46950	1.29654E-06	0.00240
511034.33	4276536.5	13022.60854	0.00230	0.03703	2.58741E-08	2.67823	1.40613E-06	0.00230
510959.53	4276510.2	10217.44197	0.00181	0.03157	2.20590E-08	10.39956	5.46001E-06	0.00181
510971.81	4276510.84	10541.47934	0.00186	0.03221	2.25062E-08	7.51261	3.94430E-06	0.00187
510964.91	4276497.69	10163.24282	0.00180	0.03151	2.20171E-08	8.60838	4.51960E-06	0.00180
510962.11	4276476.57	9790.88103	0.00173	0.03084	2.15489E-08	8.77969	4.60954E-06	0.00174
510962.54	4276462.34	9600.26695	0.00170	0.03051	2.13183E-08	8.40283	4.41168E-06	0.00170
511001.78	4276503.3	11224.75587	0.00199	0.03368	2.35333E-08	3.95213	2.07496E-06	0.00199
510995.74	4276530.46	11558.75287	0.00204	0.03411	2.38338E-08	4.76764	2.50312E-06	0.00205
511026.57	4276504.16	11984.217	0.00212	0.03531	2.46723E-08	2.73723	1.43711E-06	0.00212
511041.44	4276504.59	12586.84033	0.00223	0.03659	2.55666E-08	2.24825	1.18038E-06	0.00223
511034.33	4276471.61	11620.82701	0.00206	0.03495	2.44207E-08	2.29624	1.20558E-06	0.00206
511029.15	4276461.26	11244.09167	0.00199	0.03424	2.39246E-08	2.39894	1.25950E-06	0.00199
511013.2	4276427.63	10262.13952	0.00182	0.03238	2.26250E-08	2.76506	1.45172E-06	0.00182
511012.5	4276387.62	9676.90458	0.00171	0.03139	2.19332E-08	2.49610	1.31051E-06	0.00171
511077.94	4276401.42	11884.14304	0.00210	0.03588	2.50705E-08	1.08085	5.67471E-07	0.00210
511037.26	4276343.4	9637.69105	0.00170	0.03157	2.20590E-08	1.50148	7.88312E-07	0.00171
511102.71	4276389.03	12397.95028	0.00219	0.03665	2.56086E-08	0.81719	4.29044E-07	0.00219
511104.83	4276341.98	11437.87769	0.00202	0.03479	2.43089E-08	0.75030	3.93925E-07	0.00202
511099.17	4276325	10925.08253	0.00193	0.03383	2.36381E-08	0.77304	4.05864E-07	0.00193
511149.05	4276347.29	12694.79532	0.00225	0.03688	2.57693E-08	0.57549	3.02146E-07	0.00225
511175.94	4276353.3	13546.70775	0.00240	0.03851	2.69082E-08	0.50859	2.67022E-07	0.00240
511200.71	4276325.35	13512.67035	0.00239	0.03885	2.71458E-08	0.43864	2.30296E-07	0.00239
511144.81	4276305.9	11698.19309	0.00207	0.03501	2.44626E-08	0.55751	2.92706E-07	0.00207
511132.43	4276291.39	11088.1227	0.00196	0.03385	2.36521E-08	0.59536	3.12578E-07	0.00196
511089.62	4276270.16	9616.49427	0.00170	0.03116	2.17725E-08	0.77746	4.08185E-07	0.00170
511056.01	4276256.72	8756.95504	0.00155	0.02960	2.06825E-08	0.95458	5.01177E-07	0.00155
511114.38	4276223.11	9443.54656	0.00167	0.03051	2.13183E-08	0.60427	3.17256E-07	0.00167
511056.01	4276193.39	8002.83273	0.00142	0.02779	1.94178E-08	0.75506	3.96424E-07	0.00142
511065.21	4276110.96	7336.19912	0.00130	0.02597	1.81461E-08	0.50692	2.66145E-07	0.00130
511120.4	4276103.53	8016.59744	0.00142	0.02723	1.90265E-08	0.43630	2.29068E-07	0.00142
511146.58	4276086.91	8194.94708	0.00145	0.02774	1.93828E-08	0.38991	2.04712E-07	0.00145
511054.6	4276057.54	6759.702	0.00120	0.02456	1.71609E-08	0.40757	2.13984E-07	0.00120
511079.71	4276059.31	7076.92219	0.00125	0.02512	1.75522E-08	0.40189	2.11002E-07	0.00125
511063.79	4276032.07	6672.52543	0.00118	0.02421	1.69163E-08	0.36597	1.92143E-07	0.00118
511091.03	4276029.59	6970.60315	0.00123	0.02476	1.73006E-08	0.35654	1.87192E-07	0.00123
511112.26	4276047.99	7381.01889	0.00131	0.02572	1.79714E-08	0.36905	1.93760E-07	0.00131
511148.35	4276034.55	7701.73467	0.00136	0.02665	1.86212E-08	0.33555	1.76172E-07	0.00136
511187.26	4276047.99	8335.34946	0.00147	0.02862	1.99977E-08	0.32419	1.70207E-07	0.00147
511099.18	4276852.77	36262.85763	0.00641	0.06097	4.26017E-08	2.73272	1.43474E-06	0.00642
511091.4	4276809.98	30212.26254	0.00534	0.05633	3.93596E-08	2.68766	1.41108E-06	0.00535
511126.42	4276783.8	32379.06108	0.00573	0.06095	4.25878E-08	1.69417	8.89479E-07	0.00573
511155.44	4276841.83	44291.37477	0.00783	0.07265	5.07629E-08	1.43307	7.52395E-07	0.00784
511197.19	4276843.95	50516.6304	0.00894	0.08237	5.75546E-08	1.02943	5.40475E-07	0.00894
511240	4276846.07	55074.02289	0.00974	0.09264	6.47306E-08	0.78070	4.09886E-07	0.00974
511290.59	4276850.67	57951.78709	0.01025	0.10763	7.52046E-08	0.61388	3.22301E-07	0.01025

511322.08	4276852.44	58437.83147	0.01034	0.11864	8.28977E-08	0.53238	2.79512E-07	0.01034
511271.92	4276788.58	46961.03863	0.00831	0.08881	6.20545E-08	0.61714	3.24013E-07	0.00831
511269.62	4276751.13	41758.9374	0.00739	0.08183	5.71773E-08	0.59698	3.13428E-07	0.00739
511286.9	4276724.63	39443.29841	0.00698	0.08118	5.67231E-08	0.53225	2.79444E-07	0.00698
511322.05	4276714.26	39510.06711	0.00699	0.08693	6.07408E-08	0.45006	2.36292E-07	0.00699
511347.4	4276753.44	44287.2646	0.00783	0.10040	7.01528E-08	0.42232	2.21728E-07	0.00783
511324.93	4276787.43	48349.21767	0.00855	0.10218	7.13965E-08	0.48400	2.54111E-07	0.00855
511395.79	4276750.56	43776.0791	0.00774	0.11125	7.77340E-08	0.34479	1.81023E-07	0.00774
511433.82	4276788.58	46768.90838	0.00827	0.13204	9.22607E-08	0.30495	1.60106E-07	0.00827
511474.15	4276802.99	46202.02955	0.00817	0.14680	1.02574E-07	0.26105	1.37057E-07	0.00817
511455.71	4276828.34	49743.80343	0.00880	0.15313	1.06997E-07	0.28682	1.50587E-07	0.00880
511396.49	4276844.26	54940.50464	0.00972	0.14213	9.93109E-08	0.37488	1.96821E-07	0.00972
511369.02	4276870.9	60230.65168	0.01065	0.14308	9.99747E-08	0.43746	2.29677E-07	0.01065
511333.22	4276911.69	69445.91728	0.01228	0.14515	1.01421E-07	0.54734	2.87366E-07	0.01228
511305.33	4276950.31	79936.36107	0.01414	0.14949	1.04454E-07	0.67285	3.53262E-07	0.01414
511416.46	4276868.95	57067.31961	0.01009	0.16026	1.11979E-07	0.35045	1.83994E-07	0.01009
511406.83	4276881.28	59438.88312	0.01051	0.16290	1.13824E-07	0.37023	1.94379E-07	0.01051
511400.52	4276896.01	62067.17134	0.01098	0.16815	1.17492E-07	0.38661	2.02979E-07	0.01098
511389.39	4276913.76	65806.0486	0.01164	0.17322	1.21034E-07	0.41534	2.18063E-07	0.01164
511368.34	4276928.8	70337.87165	0.01244	0.17157	1.19882E-07	0.46995	2.46735E-07	0.01244
511356.31	4276946.84	74992.56611	0.01326	0.17585	1.22872E-07	0.51254	2.69095E-07	0.01327
511350.29	4276960.98	78628.75225	0.01391	0.18134	1.26708E-07	0.54064	2.83849E-07	0.01391
511337.96	4276975.41	83326.19908	0.01474	0.18321	1.28015E-07	0.59246	3.11055E-07	0.01474
511320.22	4276989.55	89013.77494	0.01575	0.18105	1.26506E-07	0.67248	3.53068E-07	0.01575
511421.25	4276982.31	73566.38264	0.01301	0.23784	1.66187E-07	0.37259	1.95618E-07	0.01301
511435.82	4276972.74	69828.47887	0.01235	0.23446	1.63825E-07	0.34276	1.79957E-07	0.01235
511407.51	4276951.92	70263.14317	0.01243	0.20707	1.44687E-07	0.39234	2.05988E-07	0.01243
511416.67	4276936.52	66688.12985	0.01180	0.19987	1.39656E-07	0.36948	1.93986E-07	0.01180
511441.65	4276961.5	67300.57186	0.01190	0.22696	1.58584E-07	0.33053	1.73536E-07	0.01190
511428.75	4276926.11	63780.05615	0.01128	0.19730	1.37860E-07	0.34506	1.81165E-07	0.01128
511451.64	4276947.34	63976.13413	0.01132	0.21873	1.52834E-07	0.31211	1.63865E-07	0.01132
511435.82	4276912.79	61169.27702	0.01082	0.19108	1.33514E-07	0.33053	1.73536E-07	0.01082
511462.88	4276936.52	61162.00434	0.01082	0.21349	1.49172E-07	0.29394	1.54325E-07	0.01082
510943.27	4276699.02	13351.04988	0.00236	0.03578	2.50007E-08	7.08966	3.72224E-06	0.00237
510940.61	4276686.09	12960.89336	0.00229	0.03529	2.46583E-08	7.06600	3.70981E-06	0.00230
510936.99	4276669.16	12471.22397	0.00221	0.03464	2.42041E-08	7.00920	3.67999E-06	0.00221
510931.47	4276639.48	11689.99772	0.00207	0.03355	2.34425E-08	7.10249	3.72897E-06	0.00207
510924.06	4276619.89	11092.08773	0.00196	0.03261	2.27857E-08	6.32988	3.32333E-06	0.00197
510637	4276777.21	5487.45234	0.00097	0.02333	1.63014E-08	0.17199	9.02988E-08	0.00097
510548.73	4276774.18	4325.56139	0.00077	0.01992	1.39188E-08	0.10462	5.49279E-08	0.00077
510547.21	4276898.28	3833.30663	0.00068	0.01931	1.34925E-08	0.10491	5.50802E-08	0.00068
510551.25	4276958.3	3495.91041	0.00062	0.01907	1.33248E-08	0.10776	5.65765E-08	0.00062
510650.62	4277053.14	4663.98875	0.00082	0.02333	1.63014E-08	0.17630	9.25616E-08	0.00083
510672.82	4277035.48	5327.69243	0.00094	0.02459	1.71818E-08	0.19881	1.04380E-07	0.00094
510685.93	4277000.17	5983.20032	0.00106	0.02559	1.78806E-08	0.21831	1.14618E-07	0.00106
510709.64	4277123.25	5616.96955	0.00099	0.02656	1.85583E-08	0.22645	1.18892E-07	0.00099
510551.75	4277065.75	3027.33643	0.00054	0.01934	1.35135E-08	0.11248	5.90546E-08	0.00054
510585.55	4277002.69	3708.88336	0.00066	0.02016	1.40865E-08	0.12814	6.72765E-08	0.00066
510681.05	4277526.3	8458.91216	0.00150	0.02458	1.71749E-08	0.14278	7.49628E-08	0.00150
510602.09	4277543.05	5570.38245	0.00099	0.01947	1.36043E-08	0.11026	5.78891E-08	0.00099
510585.34	4277602.27	5993.28689	0.00106	0.01909	1.33388E-08	0.10210	5.36049E-08	0.00106
510520.14	4277627.4	4859.83037	0.00086	0.01762	1.23117E-08	0.08658	4.54565E-08	0.00086
510477.07	4277653.12	4501.30653	0.00080	0.01748	1.22138E-08	0.07903	4.14926E-08	0.00080
510525.39	4277547.1	4007.99742	0.00071	0.01695	1.18435E-08	0.08945	4.69633E-08	0.00071
510511.13	4277494.37	3370.86426	0.00060	0.01666	1.16409E-08	0.08808	4.62440E-08	0.00060
510485.63	4277496.53	3143.12102	0.00056	0.01624	1.13474E-08	0.08254	4.33354E-08	0.00056
510439.39	4277515.55	2942.12862	0.00052	0.01583	1.10609E-08	0.07364	3.86627E-08	0.00052
510369.82	4277592.96	3148.59362	0.00056	0.01632	1.14033E-08	0.06501	3.41318E-08	0.00056
510394.07	4277635.94	3566.11259	0.00063	0.01675	1.17038E-08	0.06821	3.58118E-08	0.00063
510368.35	4277565.04	2976.6362	0.00053	0.01611	1.12566E-08	0.06443	3.38272E-08	0.00053
510301.12	4277596.64	2684.75479	0.00047	0.01497	1.04600E-08	0.05610	2.94538E-08	0.00047
510299.29	4277636.31	2783.57809	0.00049	0.01491	1.04181E-08	0.05625	2.95326E-08	0.00049
510267.33	4277553.29	2383.50074	0.00042	0.01410	9.85213E-09	0.05127	2.69179E-08	0.00042
510193.12	4277549.61	2065.91374	0.00037	0.01249	8.72717E-09	0.04264	2.23870E-08	0.00037
510147.56	4277487.9	1887.42818	0.00033	0.01176	8.21710E-09	0.03720	1.95309E-08	0.00033
510241.24	4277332.5	1802.46312	0.00032	0.01318	9.20930E-09	0.04360	2.28910E-08	0.00032

510316.19	4277344.99	2099.65775	0.00037	0.01474	1.02993E-08	0.05466	2.86978E-08	0.00037
510275.41	4277252.05	1730.65847	0.00031	0.01292	9.02763E-09	0.04678	2.45606E-08	0.00031
510322.06	4277228.54	1820.37048	0.00032	0.01349	9.42590E-09	0.05308	2.78682E-08	0.00032
510168.14	4277155.06	1382.63194	0.00024	0.01228	8.58044E-09	0.03743	1.96516E-08	0.00024
510109.73	4277094.81	1160.7644	0.00021	0.01127	7.87472E-09	0.03127	1.64175E-08	0.00021
510170.34	4277081.59	1277.35556	0.00023	0.01209	8.44768E-09	0.03607	1.89376E-08	0.00023
510264.36	4276914.24	1642.34489	0.00029	0.01333	9.31411E-09	0.03981	2.09012E-08	0.00029
510199.1	4276903.44	1412.8277	0.00025	0.01223	8.54550E-09	0.03204	1.68217E-08	0.00025
510157.61	4276829.53	1364.63298	0.00024	0.01151	8.04241E-09	0.02610	1.37031E-08	0.00024
510201.26	4276808.79	1544.93274	0.00027	0.01209	8.44768E-09	0.02878	1.51102E-08	0.00027
510259.18	4276827.37	1762.85488	0.00031	0.01307	9.13244E-09	0.03504	1.83968E-08	0.00031
510308.02	4276868.86	1932.04903	0.00034	0.01406	9.82418E-09	0.04354	2.28595E-08	0.00034
510330.92	4276810.08	2201.42828	0.00039	0.01439	1.00548E-08	0.04372	2.29540E-08	0.00039
510353.4	4276998.95	1919.70339	0.00034	0.01509	1.05439E-08	0.05449	2.86085E-08	0.00034
510358.58	4276903.01	2159.52471	0.00038	0.01522	1.06347E-08	0.05393	2.83145E-08	0.00038
510463.34	4276900.64	2993.10559	0.00053	0.01756	1.22697E-08	0.07558	3.96813E-08	0.00053
510416.09	4276851.59	2734.77156	0.00048	0.01640	1.14592E-08	0.06300	3.30765E-08	0.00048
510411.3	4276825.86	2767.32005	0.00049	0.01621	1.13265E-08	0.06053	3.17797E-08	0.00049
510422.67	4276746.9	3068.83588	0.00054	0.01626	1.13614E-08	0.05726	3.00628E-08	0.00054
510452.36	4276669.61	3405.66723	0.00060	0.01678	1.17247E-08	0.05837	3.06456E-08	0.00060
510518.97	4276678.76	3953.44812	0.00070	0.01865	1.30314E-08	0.08129	4.26791E-08	0.00070
510563.21	4276656.9	4283.3644	0.00076	0.01992	1.39188E-08	0.09993	5.24656E-08	0.00076
510600.33	4276627.41	4528.32532	0.00080	0.02086	1.45756E-08	0.11940	6.26878E-08	0.00080
510571.86	4276593.85	4151.32453	0.00073	0.01969	1.37580E-08	0.09613	5.04705E-08	0.00073
510522.02	4276624.36	3861.71613	0.00068	0.01850	1.29266E-08	0.07658	4.02063E-08	0.00068
510525.92	4276534.3	3626.57068	0.00064	0.01795	1.25423E-08	0.07057	3.70509E-08	0.00064
510468.25	4276503.81	3226.64137	0.00057	0.01645	1.14942E-08	0.05393	2.83145E-08	0.00057
510476.7	4276581.69	3462.07091	0.00061	0.01709	1.19413E-08	0.05876	3.08504E-08	0.00061
510425.26	4276527.32	3083.6866	0.00055	0.01570	1.09701E-08	0.04595	2.41248E-08	0.00055
510398.44	4276557.45	2998.58666	0.00053	0.01525	1.06557E-08	0.04208	2.20930E-08	0.00053
510371.12	4276602	2860.96766	0.00051	0.01480	1.03412E-08	0.03917	2.05652E-08	0.00051
510328.51	4276635.8	2562.91957	0.00045	0.01403	9.80322E-09	0.03496	1.83548E-08	0.00045
510339.9	4276656.37	2604.6487	0.00046	0.01428	9.97790E-09	0.03707	1.94626E-08	0.00046
510329.33	4276697.73	2455.50389	0.00043	0.01415	9.88707E-09	0.03755	1.97146E-08	0.00043
511060.04	4278365.13	29067.49579	0.00514	0.33054	2.30959E-07	0.08404	4.41230E-08	0.00514
511053.55	4278281.17	34767.874	0.00615	0.29070	2.03122E-07	0.09372	4.92052E-08	0.00615
511449.69	4278012.31	62544.56303	0.01106	3.08774	2.15751E-06	0.08470	4.44695E-08	0.01107
511463.6	4278021.57	57698.67544	0.01021	2.47126	1.72675E-06	0.08101	4.25321E-08	0.01021
511584.5	4278030.79	36234.62211	0.00641	0.77163	5.39163E-07	0.06484	3.40425E-08	0.00641
511579.17	4278016.57	38128.10665	0.00674	0.81873	5.72073E-07	0.06661	3.49718E-08	0.00674
511643.38	4278010.53	31261.99102	0.00553	0.54131	3.78231E-07	0.06286	3.30030E-08	0.00553
511658.54	4277976.09	31627.947	0.00559	0.51476	3.59680E-07	0.06517	3.42158E-08	0.00559
511473.56	4278066.24	48627.45109	0.00860	1.91664	1.33922E-06	0.07504	3.93977E-08	0.00860
510844.05	4276334.61	6379.61927	0.00113	0.02347	1.63993E-08	0.67351	3.53608E-07	0.00113
510819	4276360.66	6245.67991	0.00110	0.02314	1.61687E-08	0.52416	2.75196E-07	0.00111
510812.25	4276338.82	6033.78023	0.00107	0.02264	1.58193E-08	0.43635	2.29094E-07	0.00107
510766.27	4276358.28	5595.00914	0.00099	0.02149	1.50158E-08	0.28350	1.48844E-07	0.00099
510788.08	4276480.9	6568.54062	0.00116	0.02363	1.65111E-08	0.52762	2.77013E-07	0.00116
510862.95	4276608.23	9322.43366	0.00165	0.02908	2.03191E-08	1.65367	8.68215E-07	0.00165
510849.39	4276591.14	8813.43259	0.00156	0.02813	1.96554E-08	1.35351	7.10624E-07	0.00156
510838.19	4276539.85	8000.7651	0.00142	0.02665	1.86212E-08	1.18290	6.21050E-07	0.00142

North Entry Area Plan Project

2020

No Mitigation at Sensitive Receptors

Construction Annual DPM Emissions (as PM2.5 Exhaust)

Annual Average Onsite DPM Exhaust Emission Rate (grams/m2/sec):	1.15033E-07
Annual Average Offsite DPM Exhaust Emission Rate - North Road Segment (grams/sec):	4.92082E-05
Annual Average Offsite DPM Exhaust Emission Rate - South Road Segment (grams/sec):	3.69747E-05

X (m)	Y (m)	Onsite	Onsite	Offsite North Road Segment	Offsite North Road Segment	Offsite South Road Segment	Offsite South Road Segment	Total DPM (ug/m3)
		Annual DPM Exhaust w/Unit Emissions (ug/m3)	Annual DPM Exhaust w/Actual Emissions (ug/m3)	Annual DPM Exhaust w/Unit Emissions (ug/m3)	Annual DPM Exhaust w/Actual Emissions (ug/m3)	Annual DPM Exhaust w/Unit Emissions (ug/m3)	Annual DPM Exhaust w/Actual Emissions (ug/m3)	
511141.17	4277077.82	143983.886	0.01656	0.10570	5.20131E-06	3.61480	1.33656E-04	0.01670
511177.3	4277063.56	136457.4435	0.01570	0.12313	6.05900E-06	2.21847	8.20273E-05	0.01579
511115.23	4277044.7	103975.2279	0.01196	0.08728	4.29489E-06	4.28994	1.58619E-04	0.01212
511127.93	4277027.53	97231.93682	0.01118	0.08936	4.39724E-06	3.28742	1.21551E-04	0.01131
511112.48	4276990.1	72604.83919	0.00835	0.07821	3.84857E-06	3.46104	1.27971E-04	0.00848
511152.66	4277006.58	93009.69074	0.01070	0.09637	4.74219E-06	2.25686	8.34468E-05	0.01079
511185.29	4276993.19	92931.53969	0.10786	0.1069	5.30760E-06	1.59504	5.89762E-05	0.01075
511245.73	4277021.01	107435.162	0.01236	0.14969	7.36597E-06	1.13766	4.20647E-05	0.01241
511278.7	4277033.03	108845.3984	0.01252	0.18097	8.90521E-06	0.95695	3.53830E-05	0.01257
511308.58	4277036.12	105295.8119	0.01211	0.20876	1.02727E-05	0.79668	2.94570E-05	0.01215
511319.91	4277044.7	106378.1768	0.01224	0.22776	1.12077E-05	0.75252	2.78242E-05	0.01228
511336.05	4277053.98	106408.4588	0.01224	0.25484	1.25402E-05	0.68436	2.53040E-05	0.01228
511350.3	4277017.64	92493.80929	0.01064	0.22730	1.11850E-05	0.58893	2.17755E-05	0.01067
511371.36	4277040.35	94945.63707	0.01092	0.27084	1.33275E-05	0.52655	1.94690E-05	0.01095
511359.18	4277004.82	87778.85979	0.01010	0.22212	1.09301E-05	0.54667	2.02130E-05	0.01013
511380.24	4277027.53	89879.00693	0.01034	0.26205	1.28950E-05	0.49100	1.81546E-05	0.01037
511370.17	4276993.1	83365.94118	0.00959	0.21948	1.08002E-05	0.50372	1.86249E-05	0.00962
511391.78	4277015.07	84842.8157	0.00976	0.25569	1.25820E-05	0.45199	1.67122E-05	0.00979
511417.05	4277042.36	85822.77667	0.00987	0.30058	1.47910E-05	0.39442	1.45836E-05	0.00990
511377.68	4276982.47	79967.90391	0.00920	0.21522	1.05906E-05	0.47617	1.76063E-05	0.00923
511400.94	4277005	81099.08236	0.00933	0.25031	1.23173E-05	0.42455	1.56976E-05	0.00936
511412.84	4276995.66	77289.28017	0.00889	0.24678	1.21436E-05	0.39383	1.45618E-05	0.00892
511437.57	4277020.75	77445.41324	0.00891	0.28104	1.38295E-05	0.34754	1.28502E-05	0.00894
511426.67	4277032.47	81781.97923	0.00941	0.29152	1.43452E-05	0.37124	1.37265E-05	0.00944
511447.91	4277011.04	73902.85569	0.00850	0.27302	1.34348E-05	0.32709	1.20941E-05	0.00853
511458.35	4276998.96	70224.72977	0.00808	0.26299	1.29413E-05	0.30813	1.13930E-05	0.00810
511467.33	4276989.25	67391.86781	0.00775	0.25546	1.25707E-05	0.29293	1.08310E-05	0.00778
511477.22	4276977.16	64273.83517	0.00739	0.24638	1.21239E-05	0.27761	1.02646E-05	0.00742
511488.57	4276969.65	61680.44219	0.00710	0.24158	1.18877E-05	0.26185	9.68183E-06	0.00712
511498.09	4276955.18	58721.04041	0.00675	0.23157	1.13951E-05	0.24954	9.22667E-06	0.00678
511388.39	4276972.03	76385.135	0.00879	0.21301	1.04818E-05	0.44313	1.63846E-05	0.00881
511399.38	4276962.14	73074.91722	0.00841	0.21101	1.03834E-05	0.41336	1.52839E-05	0.00843
511400.53	4278315.27	31520.27527	0.00363	2.07337	1.02027E-04	0.06912	2.55569E-06	0.00373
511340.62	4278311.18	34958.6277	0.00402	5.39671	2.65562E-04	0.07837	2.89771E-06	0.00429
511345.14	4278296.52	35942.99635	0.00413	5.28159	2.59897E-04	0.07891	2.91767E-06	0.00440
511364.54	4278312.47	33720.90116	0.00388	3.42120	1.68351E-04	0.07473	2.76312E-06	0.00405
511209.12	4276947.27	78040.32853	0.00898	0.10628	5.22985E-06	1.17553	4.34649E-05	0.00903
511176.13	4276927.62	66485.68848	0.00765	0.09037	4.44694E-06	1.45589	5.38311E-05	0.00771
511219.65	4276925.86	72609.36368	0.00835	0.10489	5.16145E-06	1.03479	3.82611E-05	0.00840
511196.49	4276892.17	60574.16495	0.00697	0.09036	4.44645E-06	1.13906	4.21164E-05	0.00701
511003.4	4276731.86	17485.25777	0.00201	0.04183	2.05838E-06	10.36559	3.83265E-04	0.00240
510998.1	4276717.84	16641.23692	0.00191	0.04082	2.00868E-06	11.09401	4.10198E-04	0.00233
511028.47	4276724.85	18832.09233	0.00217	0.04393	2.16172E-06	5.45369	2.01649E-04	0.00237
511051.99	4276724.69	20504.85085	0.00236	0.04636	2.28129E-06	3.62046	1.33865E-04	0.00249
511131.57	4276736.84	28773.53077	0.00331	0.05827	2.86736E-06	1.43418	5.30284E-05	0.00337
511001.84	4276671.43	15298.95685	0.00176	0.03941	1.93929E-06	7.70438	2.84867E-04	0.00205
511001.84	4276650.09	14660.14888	0.00169	0.03862	1.90042E-06	6.91395	2.55641E-04	0.00194
511020.22	4276632.96	14965.76141	0.00172	0.03930	1.93388E-06	4.41557	1.63264E-04	0.00189
511038.75	4276665.82	17128.83818	0.00197	0.04241	2.08692E-06	3.65875	1.35281E-04	0.00211
511039.53	4276636.23	16131.45345	0.00186	0.04126	2.03033E-06	3.28189	1.21347E-04	0.00198

511082.2	4276682.64	20780.84991	0.00239	0.04799	2.36150E-06	2.12660	7.86304E-05	0.00247
511107.74	4276673.92	22370.66526	0.00257	0.05082	2.50076E-06	1.56697	5.79383E-05	0.00263
511082.67	4276634.05	18746.68195	0.00216	0.04586	2.25669E-06	1.84176	6.80986E-05	0.00223
511110.54	4276628.29	20320.80244	0.00234	0.04863	2.39299E-06	1.35728	5.01850E-05	0.00239
511127.99	4276630.94	21621.53405	0.00249	0.05063	2.49141E-06	1.16489	4.30715E-05	0.00253
511125.03	4276675.95	23930.36538	0.00275	0.05318	2.61689E-06	1.32193	4.88780E-05	0.00280
511144.81	4276679.06	25818.26761	0.00297	0.05587	2.74926E-06	1.10849	4.09861E-05	0.00301
511150.72	4276637.95	23579.15768	0.00271	0.05340	2.62772E-06	0.97630	3.60984E-05	0.00275
511169.1	4276687.47	28507.89733	0.00328	0.05940	2.92297E-06	0.91319	3.37649E-05	0.00332
511171.75	4276641.37	25220.86774	0.00290	0.05566	2.73893E-06	0.83989	3.10547E-05	0.00294
510972.24	4276568.62	11568.08874	0.00133	0.03388	1.66717E-06	9.54637	3.52974E-04	0.00169
510970.09	4276558.27	11298.68078	0.00130	0.03343	1.64503E-06	9.54705	3.52999E-04	0.00165
510968.79	4276547.92	11077.3509	0.00127	0.03307	1.62731E-06	9.43642	3.48909E-04	0.00162
510965.99	4276537.57	10821.04958	0.00124	0.03263	1.60566E-06	9.71816	3.59326E-04	0.00161
510988.84	4276570.99	12157.67891	0.00140	0.03494	1.71933E-06	6.39917	2.36608E-04	0.00164
510985.39	4276561.72	11847.34955	0.00136	0.03443	1.69424E-06	6.63621	2.45372E-04	0.00161
511025.27	4276572.93	13512.5005	0.00155	0.03746	1.84334E-06	3.34471	1.23670E-04	0.00168
511039.72	4276569.26	14102.822	0.00162	0.03867	1.90288E-06	2.70022	9.98399E-05	0.00172
511021.39	4276549	12778.73034	0.00147	0.03635	1.78872E-06	3.29799	1.21942E-04	0.00159
511014.5	4276530.03	12131.16781	0.00140	0.03528	1.73607E-06	3.46454	1.28100E-04	0.00153
511041.66	4276545.12	13560.36389	0.00156	0.03798	1.86893E-06	2.46950	9.13091E-05	0.00165
511034.33	4276536.5	13022.60854	0.00150	0.03703	1.82218E-06	2.67823	9.90268E-05	0.00160
510959.53	4276510.2	10217.44197	0.00118	0.03157	1.55350E-06	10.39956	3.84521E-04	0.00156
510971.81	4276510.84	10541.47934	0.00121	0.03221	1.58500E-06	7.51261	2.77777E-04	0.00149
510964.91	4276497.69	10163.24282	0.00117	0.03151	1.55055E-06	8.60838	3.18292E-04	0.00149
510962.11	4276476.57	9790.88103	0.00113	0.03084	1.51758E-06	8.77969	3.24627E-04	0.00145
510962.54	4276462.34	9600.26695	0.00110	0.03051	1.50134E-06	8.40283	3.10692E-04	0.00142
511001.78	4276503.3	11224.75587	0.00129	0.03368	1.65733E-06	3.95213	1.46129E-04	0.00144
510995.74	4276530.46	11558.75287	0.00133	0.03411	1.67849E-06	4.76764	1.76282E-04	0.00151
511026.57	4276504.16	11984.217	0.00138	0.03531	1.73754E-06	2.73723	1.01208E-04	0.00148
511041.44	4276504.59	12586.84033	0.00145	0.03659	1.80053E-06	2.24825	8.31284E-05	0.00153
511034.33	4276471.61	11620.82701	0.00134	0.03495	1.71983E-06	2.29624	8.49028E-05	0.00142
511029.15	4276461.26	11244.09167	0.00129	0.03424	1.68489E-06	2.39894	8.87001E-05	0.00138
511013.2	4276427.63	10262.13952	0.00118	0.03238	1.59336E-06	2.76506	1.02237E-04	0.00128
511012.5	4276387.62	9676.90458	0.00111	0.03139	1.54465E-06	2.49610	9.22926E-05	0.00121
511077.94	4276401.42	11884.14304	0.00137	0.03588	1.76559E-06	1.08085	3.99641E-05	0.00141
511037.26	4276343.4	9637.69105	0.00111	0.03157	1.55350E-06	1.50148	5.55168E-05	0.00117
511102.71	4276389.03	12397.95028	0.00143	0.03665	1.80348E-06	0.81719	3.02154E-05	0.00146
511104.83	4276341.98	11437.87769	0.00132	0.03479	1.71195E-06	0.75030	2.77421E-05	0.00135
511099.17	4276325	10925.08253	0.00126	0.03383	1.66471E-06	0.77304	2.85829E-05	0.00129
511149.05	4276347.29	12694.79532	0.00146	0.03688	1.81480E-06	0.57549	2.12786E-05	0.00148
511175.94	4276353.3	13546.70775	0.00156	0.03851	1.89501E-06	0.50859	1.88050E-05	0.00158
511200.71	4276325.35	13512.67035	0.00155	0.03885	1.91174E-06	0.43864	1.62186E-05	0.00157
511144.81	4276305.9	11698.19309	0.00135	0.03501	1.72278E-06	0.55751	2.06138E-05	0.00137
511132.43	4276291.39	11088.1227	0.00128	0.03385	1.66570E-06	0.59536	2.20133E-05	0.00130
511089.62	4276270.16	9616.49427	0.00111	0.03116	1.53333E-06	0.77746	2.87464E-05	0.00114
511056.01	4276256.72	8756.95504	0.00101	0.02960	1.45656E-06	0.95458	3.52953E-05	0.00104
511114.38	4276223.11	9443.54656	0.00109	0.03051	1.50134E-06	0.60427	2.23427E-05	0.00111
511056.01	4276193.39	8002.83273	0.00092	0.02779	1.36750E-06	0.75506	2.79181E-05	0.00095
511065.21	4276110.96	7336.19912	0.00084	0.02597	1.27794E-06	0.50692	1.87432E-05	0.00086
511120.4	4276103.53	8016.59744	0.00092	0.02723	1.33994E-06	0.43630	1.61321E-05	0.00094
511146.58	4276086.91	8194.94708	0.00094	0.02774	1.36504E-06	0.38991	1.44168E-05	0.00096
511054.6	4276057.54	6759.702	0.00078	0.02456	1.20855E-06	0.40757	1.50698E-05	0.00079
511079.71	4276059.31	7076.92219	0.00081	0.02512	1.23611E-06	0.40189	1.48598E-05	0.00083
511063.79	4276032.07	6672.52543	0.00077	0.02421	1.19133E-06	0.36597	1.35316E-05	0.00078
511091.03	4276029.59	6970.60315	0.00080	0.02476	1.21839E-06	0.35654	1.31830E-05	0.00082
511112.26	4276047.99	7381.01889	0.00085	0.02572	1.26563E-06	0.36905	1.36455E-05	0.00086
511148.35	4276034.55	7701.73467	0.00089	0.02665	1.31140E-06	0.33555	1.24069E-05	0.00090
511187.26	4276047.99	8335.34946	0.00096	0.02862	1.40834E-06	0.32419	1.19868E-05	0.00097
511099.18	4276852.79	36262.85763	0.00417	0.06097	3.00022E-06	2.73272	1.01042E-04	0.00428
511091.4	4276809.98	30212.26254	0.00348	0.05633	2.77190E-06	2.68766	9.93755E-05	0.00358
511126.42	4276783.8	32379.06108	0.00372	0.06095	2.99924E-06	1.69417	6.26415E-05	0.00379
511155.44	4276841.83	44291.37477	0.00509	0.07265	3.57498E-06	1.43307	5.29874E-05	0.00515
511197.19	4276843.95	50516.6304	0.00581	0.08237	4.05328E-06	1.02943	3.80629E-05	0.00585

511240	4276846.07	55074.02289	0.00634	0.09264	4.55865E-06	0.78070	2.88662E-05	0.00637
511290.59	4276850.67	57951.78709	0.00667	0.10763	5.29628E-06	0.61388	2.26980E-05	0.00669
511322.08	4276852.44	58437.83147	0.00672	0.11864	5.83806E-06	0.53238	1.96846E-05	0.00675
511271.92	4276788.58	46961.03863	0.00540	0.08881	4.37018E-06	0.61714	2.28186E-05	0.00543
511269.62	4276751.13	41758.9374	0.00480	0.08183	4.02671E-06	0.59698	2.20732E-05	0.00483
511286.9	4276724.63	39443.29841	0.00454	0.08118	3.99472E-06	0.53225	1.96798E-05	0.00456
511322.05	4276714.26	39510.06711	0.00454	0.08693	4.27767E-06	0.45006	1.66408E-05	0.00457
511347.4	4276753.44	44287.2646	0.00509	0.10040	4.94050E-06	0.42232	1.56152E-05	0.00512
511324.93	4276787.43	48349.21767	0.00556	0.10218	5.02809E-06	0.48400	1.78958E-05	0.00558
511395.79	4276750.56	43776.0791	0.00504	0.11125	5.47441E-06	0.34479	1.27485E-05	0.00505
511433.82	4276788.58	46768.90838	0.00538	0.13204	6.49745E-06	0.30495	1.12754E-05	0.00540
511474.15	4276802.99	46202.02955	0.00531	0.14680	7.22376E-06	0.26105	9.65225E-06	0.00533
511455.71	4276828.34	49743.80343	0.00572	0.15313	7.53525E-06	0.28682	1.06051E-05	0.00574
511396.49	4276844.26	54940.50464	0.00632	0.14213	6.99396E-06	0.37488	1.38611E-05	0.00634
511369.02	4276870.9	60230.65168	0.00693	0.14308	7.04071E-06	0.43746	1.61750E-05	0.00695
511333.22	4276911.69	69445.91728	0.00799	0.14515	7.14257E-06	0.54734	2.02377E-05	0.00802
511305.33	4276950.31	79936.36107	0.00920	0.14949	7.35613E-06	0.67285	2.48784E-05	0.00923
511416.46	4276868.95	57067.31961	0.00656	0.16026	7.88610E-06	0.35045	1.29578E-05	0.00659
511406.83	4276881.28	59438.88312	0.00684	0.16290	8.01601E-06	0.37023	1.36891E-05	0.00686
511400.52	4276896.01	62067.17134	0.00714	0.16815	8.27436E-06	0.38661	1.42948E-05	0.00716
511389.39	4276913.76	65806.0486	0.00757	0.17322	8.52384E-06	0.41534	1.53571E-05	0.00759
511368.34	4276928.8	70337.87165	0.00809	0.17157	8.44265E-06	0.46995	1.73763E-05	0.00812
511356.31	4276946.84	74992.56611	0.00863	0.17585	8.65326E-06	0.51254	1.89510E-05	0.00865
511350.29	4276960.98	78628.75225	0.00904	0.18134	8.92341E-06	0.54064	1.99900E-05	0.00907
511337.96	4276975.41	83326.19908	0.00959	0.18321	9.01543E-06	0.59246	2.19060E-05	0.00962
511320.22	4276989.55	89013.77494	0.01024	0.18105	8.90914E-06	0.67248	2.48648E-05	0.01027
511421.25	4276982.31	73566.38264	0.00846	0.23784	1.17037E-05	0.37259	1.37764E-05	0.00849
511435.82	4276972.74	69828.47887	0.00803	0.23446	1.15374E-05	0.34276	1.26735E-05	0.00806
511407.51	4276951.92	70263.14317	0.00808	0.20707	1.01895E-05	0.39234	1.45067E-05	0.00811
511416.67	4276936.52	66688.12985	0.00767	0.19987	9.83524E-06	0.36948	1.36614E-05	0.00769
511441.65	4276961.5	67300.57186	0.00774	0.22696	1.11683E-05	0.33053	1.22213E-05	0.00777
511428.75	4276926.11	63780.05615	0.00734	0.19730	9.70878E-06	0.34506	1.27585E-05	0.00736
511451.64	4276947.34	63976.13413	0.00736	0.21873	1.07633E-05	0.31211	1.15402E-05	0.00738
511435.82	4276912.79	61169.27702	0.00704	0.19108	9.40270E-06	0.33053	1.22213E-05	0.00706
511462.88	4276936.52	61162.00434	0.00704	0.21349	1.05055E-05	0.29394	1.08683E-05	0.00706
510943.27	4276699.02	13351.04988	0.00154	0.03578	1.76067E-06	7.08966	2.62138E-04	0.00180
510940.61	4276686.09	12960.89336	0.00149	0.03529	1.73656E-06	7.06600	2.61263E-04	0.00175
510936.99	4276669.16	12471.22397	0.00143	0.03464	1.70457E-06	7.00920	2.59163E-04	0.00170
510931.47	4276639.48	11689.99772	0.00134	0.03355	1.65093E-06	7.10249	2.62613E-04	0.00161
510924.06	4276619.89	11092.08773	0.00128	0.03261	1.60468E-06	6.32988	2.34046E-04	0.00151
510637	4276777.21	5487.45234	0.00633	0.02333	1.14803E-06	0.17199	6.35928E-06	0.00064
510548.73	4276774.18	4325.56139	0.00050	0.01992	9.80227E-07	0.10462	3.86829E-06	0.00050
510547.21	4276898.28	3833.30663	0.00044	0.01931	9.50210E-07	0.10491	3.87902E-06	0.00045
510551.25	4276958.3	3495.91041	0.00040	0.01907	9.38400E-07	0.10776	3.98440E-06	0.00041
510650.62	4277053.14	4663.98875	0.00054	0.02333	1.14803E-06	0.17630	6.51864E-06	0.00054
510672.82	4277035.48	5327.69243	0.00061	0.02459	1.21003E-06	0.19881	7.35094E-06	0.00062
510685.93	4277000.17	5983.20032	0.00069	0.02559	1.25924E-06	0.21831	8.07195E-06	0.00070
510709.64	4277123.25	5616.96955	0.00065	0.02656	1.30697E-06	0.22645	8.37292E-06	0.00066
510551.75	4277065.75	3027.33643	0.00035	0.01934	9.51686E-07	0.11248	4.15892E-06	0.00035
510585.55	4277002.69	3708.88336	0.00043	0.02016	9.92037E-07	0.12814	4.73794E-06	0.00043
510681.05	4277526.3	8458.91216	0.00097	0.02458	1.20954E-06	0.14278	5.27925E-06	0.00098
510602.09	4277543.05	5570.38245	0.00064	0.01947	9.58083E-07	0.11026	4.07683E-06	0.00065
510585.34	4277602.27	5993.28689	0.00069	0.01909	9.39384E-07	0.10210	3.77512E-06	0.00069
510520.14	4277627.4	4859.83037	0.00056	0.01762	8.67048E-07	0.08658	3.20127E-06	0.00056
510477.07	4277653.12	4501.30653	0.00052	0.01748	8.60159E-07	0.07903	2.92211E-06	0.00052
510525.39	4277547.1	4007.99742	0.00046	0.01695	8.34079E-07	0.08945	3.30739E-06	0.00047
510511.13	4277494.37	3370.86426	0.00039	0.01666	8.19808E-07	0.08808	3.25673E-06	0.00039
510485.63	4277496.53	3143.12102	0.00036	0.01624	7.99141E-07	0.08254	3.05189E-06	0.00037
510439.39	4277515.55	2942.12862	0.00034	0.01583	7.78966E-07	0.07364	2.72282E-06	0.00034
510369.82	4277592.96	3148.59362	0.00036	0.01632	8.03078E-07	0.06501	2.40373E-06	0.00037
510394.07	4277635.94	3566.11259	0.00041	0.01675	8.24237E-07	0.06821	2.52205E-06	0.00041
510368.35	4277565.04	2976.6362	0.00034	0.01611	7.92744E-07	0.06443	2.38228E-06	0.00035
510301.12	4277596.64	2684.75479	0.00031	0.01497	7.36647E-07	0.05610	2.07428E-06	0.00031
510299.29	4277636.31	2783.57809	0.00032	0.01491	7.33694E-07	0.05625	2.07983E-06	0.00032

510267.33	4277553.29	2383.50074	0.00027	0.01410	6.93836E-07	0.05127	1.89569E-06	0.00028
510193.12	4277549.61	2065.91374	0.00024	0.01249	6.14610E-07	0.04264	1.57660E-06	0.00024
510147.56	4277487.9	1887.42818	0.00022	0.01176	5.78688E-07	0.03720	1.37546E-06	0.00022
510241.24	4277332.5	1802.46312	0.00021	0.01318	6.48564E-07	0.04360	1.61210E-06	0.00021
510316.19	4277344.99	2099.65775	0.00024	0.01474	7.25329E-07	0.05466	2.02104E-06	0.00024
510275.41	4277252.05	1730.65847	0.00020	0.01292	6.35770E-07	0.04678	1.72968E-06	0.00020
510322.06	4277228.54	1820.37048	0.00021	0.01349	6.63819E-07	0.05308	1.96262E-06	0.00021
510168.14	4277155.06	1382.63194	0.00016	0.01228	6.04277E-07	0.03743	1.38396E-06	0.00016
510109.73	4277094.81	1160.7644	0.00013	0.01127	5.54576E-07	0.03127	1.15620E-06	0.00014
510170.34	4277081.59	1277.35556	0.00015	0.01209	5.94927E-07	0.03607	1.33368E-06	0.00015
510264.36	4276914.24	1642.34489	0.00019	0.01333	6.55945E-07	0.03981	1.47196E-06	0.00019
510199.1	4276903.44	1412.8277	0.00016	0.01223	6.01816E-07	0.03204	1.18467E-06	0.00016
510157.61	4276829.53	1364.63298	0.00016	0.01151	5.66386E-07	0.02610	9.65040E-07	0.00016
510201.26	4276808.79	1544.93274	0.00018	0.01209	5.94927E-07	0.02878	1.06413E-06	0.00018
510259.18	4276827.37	1762.85488	0.00020	0.01307	6.43151E-07	0.03504	1.29559E-06	0.00020
510308.02	4276868.86	1932.04903	0.00022	0.01406	6.91867E-07	0.04354	1.60988E-06	0.00022
510330.92	4276810.08	2201.42828	0.00025	0.01439	7.08106E-07	0.04372	1.61653E-06	0.00026
510353.4	4276998.95	1919.70339	0.00022	0.01509	7.42552E-07	0.05449	2.01475E-06	0.00022
510358.58	4276903.01	2159.52471	0.00025	0.01522	7.48949E-07	0.05393	1.99405E-06	0.00025
510463.34	4276900.64	2993.10559	0.00034	0.01756	8.64096E-07	0.07558	2.79455E-06	0.00035
510416.09	4276851.59	2734.77156	0.00031	0.01640	8.07014E-07	0.06300	2.32941E-06	0.00032
510411.3	4276825.86	2767.32005	0.00032	0.01621	7.97665E-07	0.06053	2.23808E-06	0.00032
510422.67	4276746.9	3068.83588	0.00035	0.01626	8.00125E-07	0.05726	2.11717E-06	0.00036
510452.36	4276669.61	3405.66723	0.00039	0.01678	8.25713E-07	0.05837	2.15821E-06	0.00039
510518.97	4276678.76	3953.44812	0.00045	0.01865	9.17733E-07	0.08129	3.00567E-06	0.00046
510563.21	4276656.9	4283.3644	0.00049	0.01992	9.80227E-07	0.09993	3.69488E-06	0.00050
510600.33	4276627.41	4528.32532	0.00052	0.02086	1.02648E-06	0.11940	4.41478E-06	0.00053
510571.86	4276593.85	4151.32453	0.00048	0.01969	9.68909E-07	0.09613	3.55438E-06	0.00048
510522.02	4276624.36	3861.71613	0.00044	0.01850	9.10352E-07	0.07658	2.83152E-06	0.00045
510525.92	4276534.3	3626.57068	0.00042	0.01795	8.83287E-07	0.07057	2.60931E-06	0.00042
510468.25	4276503.81	3226.64137	0.00037	0.01645	8.09475E-07	0.05393	1.99405E-06	0.00037
510476.7	4276581.69	3462.07091	0.00040	0.01709	8.40968E-07	0.05876	2.17263E-06	0.00040
510425.26	4276527.32	3083.6866	0.00035	0.01570	7.72569E-07	0.04595	1.69899E-06	0.00036
510398.44	4276557.45	2998.58666	0.00034	0.01525	7.50425E-07	0.04208	1.55590E-06	0.00035
510371.12	4276602	2860.96766	0.00033	0.01480	7.28281E-07	0.03917	1.44830E-06	0.00033
510328.51	4276635.8	2562.91957	0.00029	0.01403	6.90391E-07	0.03496	1.29264E-06	0.00030
510339.9	4276656.37	2604.6487	0.00030	0.01428	7.02693E-07	0.03707	1.37065E-06	0.00030
510329.33	4276697.73	2455.50389	0.00028	0.01415	6.96296E-07	0.03755	1.38840E-06	0.00028
511060.04	4278365.13	29067.49579	0.00334	0.33054	1.62653E-05	0.08404	3.10736E-06	0.00336
511053.55	4278281.17	34767.874	0.00400	0.29070	1.43048E-05	0.09372	3.46527E-06	0.00402
511449.69	4278012.31	62544.56303	0.00719	3.08774	1.51942E-04	0.08470	3.13176E-06	0.00735
511463.6	4278021.57	57698.67544	0.00664	2.47126	1.21606E-04	0.08101	2.99532E-06	0.00676
511584.5	4278030.79	36234.62211	0.00417	0.77163	3.79705E-05	0.06484	2.39744E-06	0.00421
511579.17	4278016.57	38128.10665	0.00439	0.81873	4.02882E-05	0.06661	2.46289E-06	0.00443
511643.38	4278010.53	31261.99102	0.00360	0.54131	2.66369E-05	0.06286	2.32423E-06	0.00363
511658.54	4277976.09	31627.947	0.00364	0.51476	2.53304E-05	0.06517	2.40964E-06	0.00367
511473.56	4278066.24	48627.45109	0.00559	1.91664	9.43144E-05	0.07504	2.77458E-06	0.00569
510844.05	4276334.61	6379.61927	0.00073	0.02347	1.15492E-06	0.67351	2.49028E-05	0.00076
510819	4276360.66	6245.67991	0.00072	0.02314	1.13868E-06	0.52416	1.93807E-05	0.00074
510812.25	4276338.82	6033.78023	0.00069	0.02264	1.11407E-06	0.43635	1.61339E-05	0.00071
510766.27	4276358.28	5595.00914	0.00064	0.02149	1.05748E-06	0.28350	1.04823E-05	0.00066
510788.08	4276480.9	6568.54062	0.00076	0.02363	1.16279E-06	0.52762	1.95086E-05	0.00078
510862.95	4276608.23	9322.43366	0.00107	0.02908	1.43097E-06	1.65367	6.11440E-05	0.00113
510849.39	4276591.14	8813.43259	0.00101	0.02813	1.38423E-06	1.35351	5.00456E-05	0.00107
510838.19	4276539.85	8000.7651	0.00092	0.02665	1.31140E-06	1.18290	4.37374E-05	0.00097

North Entry Area Plan Project

2021

No Mitigation at Sensitive Receptors

Construction Annual DPM Emissions (as PM2.5 Exhaust)

Annual Average Onsite DPM Exhaust Emission Rate (grams/m²/sec): 8.28458E-08
 Annual Average Offsite DPM Exhaust Emission Rate - North Road Segment (grams/sec): 2.11296E-05
 Annual Average Offsite DPM Exhaust Emission Rate - South Road Segment (grams/sec): 1.58767E-05

X (m)	Y (m)	Onsite Annual DPM Exhaust	Onsite Annual DPM Exhaust	Offsite North Road Segment Annual DPM Exhaust	Offsite North Road Segment Annual DPM Exhaust	Offsite South Road Segment Annual DPM Exhaust	Offsite South Road Segment Annual DPM Exhaust	Total DPM
		w/Unit Emissions (ug/m ³)	w/Actual Emissions (ug/m ³)	w/Unit Emissions (ug/m ³)	w/Actual Emissions (ug/m ³)	w/Unit Emissions (ug/m ³)	w/Actual Emissions (ug/m ³)	
511141.17	4277077.82	143983.886	0.01193	0.10570	2.23340E-06	3.61480	5.73910E-05	0.01199
511177.3	4277063.56	136457.4435	0.01130	0.12313	2.60169E-06	2.21847	3.52219E-05	0.01134
511115.23	4277044.7	103975.2279	0.00861	0.08728	1.84419E-06	4.28994	6.81099E-05	0.00868
511127.93	4277027.53	97231.93682	0.00806	0.08936	1.88814E-06	3.28742	5.21933E-05	0.00811
511112.48	4276990.1	72604.83919	0.00602	0.07821	1.65255E-06	3.46104	5.49498E-05	0.00607
511152.66	4277006.58	93009.69074	0.00771	0.09637	2.03626E-06	2.25686	3.58314E-05	0.00774
511185.29	4276993.19	92931.53969	0.00770	0.10786	2.27904E-06	1.59504	2.53239E-05	0.00773
511245.73	4277021.01	107435.162	0.00890	0.14969	3.16289E-06	1.13766	1.80622E-05	0.00892
511278.7	4277033.03	108845.3984	0.00902	0.18097	3.82383E-06	0.95695	1.51932E-05	0.00904
511308.58	4277036.12	105295.8119	0.00872	0.20876	4.41102E-06	0.79668	1.26486E-05	0.00874
511319.91	4277044.7	106378.1768	0.00881	0.22776	4.81248E-06	0.75252	1.19475E-05	0.00883
511336.05	4277053.98	106408.4588	0.00882	0.25484	5.38467E-06	0.68436	1.08654E-05	0.00883
511350.3	4277017.64	92493.80929	0.00766	0.22730	4.80276E-06	0.58893	9.35024E-06	0.00768
511371.36	4277040.35	94945.63707	0.00787	0.27084	5.72275E-06	0.52655	8.35986E-06	0.00788
511359.18	4277004.82	87778.85979	0.00727	0.22212	4.69331E-06	0.54667	8.67929E-06	0.00729
511380.24	4277027.53	89879.00693	0.00745	0.26205	5.53702E-06	0.49100	7.79544E-06	0.00746
511370.17	4276993.1	83365.94118	0.00691	0.21948	4.63753E-06	0.50372	7.99739E-06	0.00692
511391.78	4277015.07	84842.8157	0.00703	0.25569	5.40263E-06	0.45199	7.17609E-06	0.00704
511417.05	4277042.36	85822.77667	0.00711	0.30058	6.35114E-06	0.39442	6.26207E-06	0.00712
511377.68	4276982.47	79967.90391	0.00663	0.21522	4.54752E-06	0.47617	7.55999E-06	0.00664
511400.94	4277005	81099.08236	0.00672	0.25031	5.28896E-06	0.42455	6.74044E-06	0.00673
511412.84	4276995.66	77289.28017	0.00640	0.24678	5.21437E-06	0.39383	6.25271E-06	0.00641
511437.57	4277020.75	77445.41324	0.00642	0.28104	5.93827E-06	0.34754	5.51777E-06	0.00643
511426.67	4277032.47	81781.97923	0.00678	0.29152	6.15971E-06	0.37124	5.89405E-06	0.00679
511447.91	4277011.04	73902.85569	0.00612	0.27302	5.76881E-06	0.32709	5.19310E-06	0.00613
511458.35	4276998.96	70224.72977	0.00582	0.26299	5.55688E-06	0.30813	4.89208E-06	0.00583
511467.33	4276989.25	67391.86781	0.00558	0.25546	5.39777E-06	0.29293	4.65075E-06	0.00559
511477.22	4276977.16	64273.83517	0.00532	0.24638	5.20592E-06	0.27761	4.40752E-06	0.00533
511488.57	4276969.65	61680.44219	0.00511	0.24158	5.10449E-06	0.26185	4.15730E-06	0.00512
511498.09	4276955.18	58721.04041	0.00486	0.23157	4.89299E-06	0.24954	3.96186E-06	0.00487
511388.39	4276972.03	76385.135	0.00633	0.21301	4.50082E-06	0.44313	7.03542E-06	0.00634
511399.38	4276962.14	73074.91722	0.00605	0.21101	4.45856E-06	0.41336	6.56278E-06	0.00606
511400.53	4278315.27	31520.27527	0.00261	2.07337	4.38095E-05	0.06912	1.09739E-06	0.00266
511340.62	4278311.18	34958.6277	0.00290	5.39671	1.14030E-04	0.07837	1.24425E-06	0.00301
511345.14	4278296.52	35942.99635	0.00298	5.28159	1.11598E-04	0.07891	1.25283E-06	0.00309
511364.54	4278312.47	33720.90116	0.00279	3.42120	7.22887E-05	0.07473	1.18646E-06	0.00287
511209.12	4276947.27	78040.32853	0.00647	0.10628	2.24566E-06	1.17553	1.86635E-05	0.00649
511176.13	4276927.62	66485.68848	0.00551	0.09037	1.90948E-06	1.45589	2.31147E-05	0.00553
511219.65	4276925.86	72609.36368	0.00602	0.10489	2.21629E-06	1.03479	1.64290E-05	0.00603
511196.49	4276892.17	60574.16495	0.00502	0.09036	1.90927E-06	1.13906	1.80845E-05	0.00504
511003.4	4276731.86	17485.25777	0.00145	0.04183	8.83852E-07	10.36559	1.64571E-04	0.00161
510998.1	4276717.84	16641.23692	0.00138	0.04082	8.62511E-07	11.09401	1.76136E-04	0.00156
511028.47	4276724.85	18832.09233	0.00156	0.04393	9.28224E-07	5.45369	8.65864E-05	0.00165
511051.99	4276724.69	20504.85085	0.00170	0.04636	9.79569E-07	3.62046	5.74808E-05	0.00176
511131.57	4276736.84	28773.53077	0.00238	0.05827	1.23122E-06	1.43418	2.27700E-05	0.00241
511001.84	4276671.43	15298.95685	0.00127	0.03941	8.32718E-07	7.70438	1.22320E-04	0.00139
511001.84	4276650.09	14660.14888	0.00121	0.03862	8.16026E-07	6.91395	1.09770E-04	0.00133
511020.22	4276632.96	14965.76141	0.00124	0.03930	8.30394E-07	4.41557	7.01045E-05	0.00131

511038.75	4276665.82	17128.83818	0.00142	0.04241	8.96107E-07	3.65875	5.80887E-05	0.00148
511039.53	4276636.23	16131.45345	0.00134	0.04126	8.71808E-07	3.28189	5.21055E-05	0.00139
511082.2	4276682.64	20780.84991	0.00172	0.04799	1.01401E-06	2.12660	3.37633E-05	0.00176
511107.74	4276673.92	22370.66526	0.00185	0.05082	1.07381E-06	1.56697	2.48783E-05	0.00188
511082.67	4276634.05	18746.68195	0.00155	0.04586	9.69004E-07	1.84176	2.92410E-05	0.00158
511110.54	4276628.29	20320.80244	0.00168	0.04863	1.02753E-06	1.35728	2.15491E-05	0.00171
511127.99	4276630.94	21621.53405	0.00179	0.05063	1.06979E-06	1.16489	1.84946E-05	0.00181
511125.03	4276675.95	23930.36538	0.00198	0.05318	1.12367E-06	1.32193	2.09878E-05	0.00200
511144.81	4276679.06	25818.26761	0.00214	0.05587	1.18051E-06	1.10849	1.75991E-05	0.00216
511150.72	4276637.95	23579.15768	0.00195	0.05340	1.12832E-06	0.97630	1.55004E-05	0.00197
511169.1	4276687.47	28507.89733	0.00236	0.05940	1.25510E-06	0.91319	1.44984E-05	0.00238
511171.75	4276641.37	25220.86774	0.00209	0.05566	1.17607E-06	0.83989	1.33346E-05	0.00210
510972.24	4276568.62	11568.08874	0.00096	0.03388	7.15872E-07	9.54637	1.51564E-04	0.00111
510970.09	4276558.27	11298.68078	0.00094	0.03343	7.06363E-07	9.54705	1.51575E-04	0.00109
510968.79	4276547.92	11077.3509	0.00092	0.03307	6.98757E-07	9.43642	1.49819E-04	0.00107
510965.99	4276537.57	10821.04958	0.00090	0.03263	6.89460E-07	9.71816	1.54292E-04	0.00105
510988.84	4276570.99	12157.67891	0.00101	0.03494	7.38269E-07	6.39917	1.01597E-04	0.00111
510985.39	4276561.72	11847.34955	0.00098	0.03443	7.27493E-07	6.63621	1.05361E-04	0.00109
511025.27	4276572.93	13512.5005	0.00112	0.03746	7.91516E-07	3.34471	5.31028E-05	0.00117
511039.72	4276569.26	14102.822	0.00117	0.03867	8.17082E-07	2.70022	4.28705E-05	0.00121
511021.39	4276549	12778.73034	0.00106	0.03635	7.68062E-07	3.29799	5.23611E-05	0.00111
511014.5	4276530.03	12131.16781	0.00101	0.03528	7.45453E-07	3.46454	5.50053E-05	0.00106
511041.66	4276545.12	13560.36389	0.00112	0.03798	8.02503E-07	2.46950	3.92074E-05	0.00116
511034.33	4276536.5	13022.60854	0.00108	0.03703	7.82430E-07	2.67823	4.25213E-05	0.00112
510959.53	4276510.2	10217.44197	0.00085	0.03157	6.67062E-07	10.39956	1.65110E-04	0.00101
510971.81	4276510.84	10541.47934	0.00087	0.03221	6.80585E-07	7.51261	1.19275E-04	0.00099
510964.91	4276497.69	10163.24282	0.00084	0.03151	6.65794E-07	8.60838	1.36672E-04	0.00098
510962.11	4276476.57	9790.88103	0.00081	0.03084	6.51637E-07	8.77969	1.39392E-04	0.00095
510962.54	4276462.34	9600.26695	0.00080	0.03051	6.44665E-07	8.40283	1.33409E-04	0.00093
511001.78	4276503.3	11224.75587	0.00093	0.03368	7.11646E-07	3.95213	6.27466E-05	0.00099
510995.74	4276530.46	11558.75287	0.00096	0.03411	7.20731E-07	4.76764	7.56942E-05	0.00103
511026.57	4276504.16	11984.217	0.00099	0.03531	7.46087E-07	2.73723	4.34581E-05	0.00104
511041.44	4276504.59	12586.84033	0.00104	0.03659	7.73133E-07	2.24825	3.56947E-05	0.00108
511034.33	4276471.61	11620.82701	0.00096	0.03495	7.38480E-07	2.29624	3.64566E-05	0.00100
511029.15	4276461.26	11244.09167	0.00093	0.03424	7.23478E-07	2.39894	3.80872E-05	0.00097
511013.2	4276427.63	10262.13952	0.00085	0.03238	6.84177E-07	2.76506	4.38999E-05	0.00089
511012.5	4276387.62	9676.90458	0.00080	0.03139	6.63259E-07	2.49610	3.96297E-05	0.00084
511077.94	4276401.42	11884.14304	0.00098	0.03588	7.58131E-07	1.08085	1.71603E-05	0.00100
511037.26	4276343.4	9637.69105	0.00080	0.03157	6.67062E-07	1.50148	2.38385E-05	0.00082
511102.71	4276389.03	12397.95028	0.00103	0.03665	7.74401E-07	0.81719	1.29742E-05	0.00104
511104.83	4276341.98	11437.87769	0.00095	0.03479	7.35099E-07	0.75030	1.19123E-05	0.00096
511099.17	4276325	10925.08253	0.00091	0.03383	7.14815E-07	0.77304	1.22733E-05	0.00092
511149.05	4276347.29	12694.79532	0.00105	0.03688	7.79260E-07	0.57549	9.13686E-06	0.00106
511175.94	4276353.3	13546.70775	0.00112	0.03851	8.13702E-07	0.50859	8.07471E-06	0.00113
511200.71	4276325.35	13512.67035	0.00112	0.03885	8.20886E-07	0.43864	6.96414E-06	0.00113
511144.81	4276305.9	11698.19309	0.00097	0.03501	7.39748E-07	0.55751	8.85140E-06	0.00098
511132.43	4276291.39	11088.1227	0.00092	0.03385	7.15238E-07	0.59536	9.45233E-06	0.00093
511089.62	4276270.16	9616.49427	0.00080	0.03116	6.58399E-07	0.77746	1.23435E-05	0.00081
511056.01	4276256.72	8756.95504	0.00073	0.02960	6.25437E-07	0.95458	1.51555E-05	0.00074
511114.38	4276223.11	9443.54656	0.00078	0.03051	6.44665E-07	0.60427	9.59379E-06	0.00079
511056.01	4276193.39	8002.83273	0.00066	0.02779	5.87192E-07	0.75506	1.19878E-05	0.00068
511065.21	4276110.96	7336.19912	0.00061	0.02597	5.48736E-07	0.50692	8.04820E-06	0.00062
511120.4	4276103.53	8016.59744	0.00066	0.02723	5.75360E-07	0.43630	6.92699E-06	0.00067
511146.58	4276086.91	8194.94708	0.00068	0.02774	5.86136E-07	0.38991	6.19047E-06	0.00069
511054.6	4276057.54	6759.702	0.00056	0.02456	5.18943E-07	0.40757	6.47085E-06	0.00057
511079.71	4276059.31	7076.92219	0.00059	0.02512	5.30776E-07	0.40189	6.38067E-06	0.00059
511063.79	4276032.07	6672.52543	0.00055	0.02421	5.11548E-07	0.36597	5.81038E-06	0.00056
511091.03	4276029.59	6970.60315	0.00058	0.02476	5.23169E-07	0.35654	5.66066E-06	0.00058
511112.26	4276047.99	7381.01889	0.00061	0.02572	5.43454E-07	0.36905	5.85928E-06	0.00062
511148.35	4276034.55	7701.73467	0.00064	0.02665	5.63104E-07	0.33555	5.32741E-06	0.00064
511187.26	4276047.99	8335.34946	0.00069	0.02862	6.04730E-07	0.32419	5.14705E-06	0.00070
511099.18	4276852.79	36262.85763	0.00300	0.06097	1.28827E-06	2.73272	4.33865E-05	0.00305

511091.4	4276809.98	30212.26254	0.00250	0.05633	1.19023E-06	2.68766	4.26711E-05	0.00255
511126.42	4276783.8	32379.06108	0.00268	0.06095	1.28785E-06	1.69417	2.68978E-05	0.00271
511155.44	4276841.83	44291.37477	0.00367	0.07265	1.53507E-06	1.43307	2.27524E-05	0.00369
511197.19	4276843.95	50516.6304	0.00419	0.08237	1.74045E-06	1.02943	1.63439E-05	0.00420
511240	4276846.07	55074.02289	0.00456	0.09264	1.95745E-06	0.78070	1.23949E-05	0.00458
511290.59	4276850.67	57951.78709	0.00480	0.10763	2.27418E-06	0.61388	9.74636E-06	0.00481
511322.08	4276852.44	58437.83147	0.00484	0.11864	2.50682E-06	0.53225	8.45242E-06	0.00485
511271.92	4276788.58	46961.03863	0.00389	0.08881	1.87652E-06	0.61714	9.79812E-06	0.00390
511269.62	4276751.13	41758.9374	0.00346	0.08183	1.72904E-06	0.59698	9.47805E-06	0.00347
511286.9	4276724.63	39443.29841	0.00327	0.08118	1.71530E-06	0.53225	8.45035E-06	0.00328
511322.05	4276714.26	39510.06711	0.00327	0.08693	1.83680E-06	0.45006	7.14545E-06	0.00328
511347.4	4276753.44	44287.2646	0.00367	0.10040	2.12141E-06	0.42232	6.70503E-06	0.00368
511324.93	4276787.43	48349.21767	0.00401	0.10218	2.15902E-06	0.48400	7.68430E-06	0.00402
511395.79	4276750.56	43776.0791	0.00363	0.11125	2.35067E-06	0.34479	5.47411E-06	0.00363
511433.82	4276788.58	46768.90838	0.00387	0.13204	2.78996E-06	0.30495	4.84159E-06	0.00388
511474.15	4276802.99	46202.02955	0.00383	0.14680	3.10183E-06	0.26105	4.14460E-06	0.00383
511455.71	4276828.34	49743.80343	0.00412	0.15313	3.23558E-06	0.28682	4.55374E-06	0.00413
511396.49	4276844.26	54940.50464	0.00455	0.14213	3.00315E-06	0.37488	5.95184E-06	0.00456
511369.02	4276870.9	60230.65168	0.00499	0.14308	3.02323E-06	0.43746	6.94540E-06	0.00500
511333.22	4276911.69	69445.91728	0.00575	0.14515	3.06696E-06	0.54734	8.68993E-06	0.00577
511305.33	4276950.31	79936.36107	0.00662	0.14949	3.15867E-06	0.67285	1.06826E-05	0.00664
511416.46	4276868.95	57067.31961	0.00473	0.16026	3.38623E-06	0.35045	5.56398E-06	0.00474
511406.83	4276881.28	59438.88312	0.00492	0.16290	3.44202E-06	0.37023	5.87802E-06	0.00493
511400.52	4276896.01	62067.17134	0.00514	0.16815	3.55295E-06	0.38661	6.13808E-06	0.00515
511389.39	4276913.76	65806.0486	0.00545	0.17322	3.66007E-06	0.41534	6.59421E-06	0.00546
511368.34	4276928.8	70337.87165	0.00583	0.17157	3.62521E-06	0.46995	7.46124E-06	0.00584
511356.31	4276946.84	74992.56611	0.00621	0.17585	3.71564E-06	0.51254	8.13742E-06	0.00622
511350.29	4276960.98	78628.75225	0.00651	0.18134	3.83165E-06	0.54064	8.58356E-06	0.00653
511337.96	4276975.41	83326.19908	0.00690	0.18321	3.87116E-06	0.59246	9.40629E-06	0.00692
511320.22	4276989.55	89013.77494	0.00737	0.18105	3.82552E-06	0.67248	1.06767E-05	0.00739
511421.25	4276982.31	73566.38264	0.00609	0.23784	5.02547E-06	0.37259	5.91548E-06	0.00611
511435.82	4276972.74	69828.47887	0.00578	0.23446	4.95405E-06	0.34276	5.44188E-06	0.00580
511407.51	4276951.92	70263.14317	0.00582	0.20707	4.37531E-06	0.39234	6.22905E-06	0.00583
511416.67	4276936.52	66688.12985	0.00552	0.19987	4.22318E-06	0.36948	5.86611E-06	0.00553
511441.65	4276961.5	67300.57186	0.00558	0.22696	4.79558E-06	0.33053	5.24771E-06	0.00559
511428.75	4276926.11	63780.05615	0.00528	0.19730	4.16887E-06	0.34506	5.47840E-06	0.00529
511451.64	4276947.34	63976.13413	0.00530	0.21873	4.62168E-06	0.31211	4.95526E-06	0.00531
511435.82	4276912.79	61169.27702	0.00507	0.19108	4.03745E-06	0.33053	5.24771E-06	0.00508
511462.88	4276936.52	61162.00434	0.00507	0.21349	4.51096E-06	0.29394	4.66679E-06	0.00508
510943.27	4276699.02	13351.04988	0.00111	0.03578	7.56018E-07	7.08966	1.12560E-04	0.00122
510940.61	4276686.09	12960.89336	0.00107	0.03529	7.45664E-07	7.06600	1.12184E-04	0.00119
510936.99	4276669.16	12471.22397	0.00103	0.03464	7.31930E-07	7.00920	1.11283E-04	0.00115
510931.47	4276639.48	11689.99772	0.00097	0.03355	7.08899E-07	7.10249	1.12764E-04	0.00108
510924.06	4276619.89	11092.08773	0.00092	0.03261	6.89037E-07	6.32988	1.00497E-04	0.00102
510637	4276777.21	5487.45234	0.00045	0.02333	4.92954E-07	0.17199	2.73063E-06	0.00046
510548.73	4276774.18	4325.56139	0.00036	0.01992	4.20902E-07	0.10462	1.66102E-06	0.00036
510547.21	4276898.28	3833.30663	0.00032	0.01931	4.08013E-07	0.10491	1.66562E-06	0.00032
510551.25	4276958.3	3495.91041	0.00029	0.01907	4.02942E-07	0.10776	1.71087E-06	0.00029
510650.62	4277053.14	4663.98875	0.00039	0.02333	4.92954E-07	0.17630	2.79906E-06	0.00039
510672.82	4277035.48	5327.69243	0.00044	0.02459	5.19577E-07	0.19881	3.15644E-06	0.00045
510685.93	4277000.17	5983.20032	0.00050	0.02559	5.40707E-07	0.21831	3.46603E-06	0.00050
510709.64	4277123.25	5616.96955	0.00047	0.02656	5.61203E-07	0.22645	3.59527E-06	0.00047
510551.75	4277065.75	3027.33643	0.00025	0.01934	4.08647E-07	0.11248	1.78581E-06	0.00025
510585.55	4277002.69	3708.88336	0.00031	0.02016	4.25973E-07	0.12814	2.03444E-06	0.00031
510681.05	4277526.3	8458.91216	0.00070	0.02458	5.19366E-07	0.14278	2.26687E-06	0.00070
510602.09	4277543.05	5570.38245	0.00046	0.01947	4.11394E-07	0.11026	1.75056E-06	0.00046
510585.34	4277602.27	5993.28689	0.00050	0.01909	4.03364E-07	0.10210	1.62101E-06	0.00050
510520.14	4277627.4	4859.83037	0.00040	0.01762	3.72304E-07	0.08658	1.37460E-06	0.00040
510477.07	4277653.12	4501.30653	0.00037	0.01748	3.69346E-07	0.07903	1.25473E-06	0.00037
510525.39	4277547.1	4007.99742	0.00033	0.01695	3.58147E-07	0.08945	1.42017E-06	0.00033
510511.13	4277494.37	3370.86426	0.00028	0.01666	3.52019E-07	0.08808	1.39842E-06	0.00028
510485.63	4277496.53	3143.12102	0.00026	0.01624	3.43145E-07	0.08254	1.31046E-06	0.00026

510439.39	4277515.55	2942.12862	0.00024	0.01583	3.34482E-07	0.07364	1.16916E-06	0.00025
510369.82	4277592.96	3148.59362	0.00026	0.01632	3.44835E-07	0.06501	1.03214E-06	0.00026
510394.07	4277635.94	3566.11259	0.00030	0.01675	3.53921E-07	0.06821	1.08295E-06	0.00030
510368.35	4277565.04	2976.6362	0.00025	0.01611	3.40398E-07	0.06443	1.02293E-06	0.00025
510301.12	4277596.64	2684.75479	0.00022	0.01497	3.16310E-07	0.05610	8.90681E-07	0.00022
510299.29	4277636.31	2783.57809	0.00023	0.01491	3.15043E-07	0.05625	8.93062E-07	0.00023
510267.33	4277553.29	2383.50074	0.00020	0.01410	2.97928E-07	0.05127	8.13996E-07	0.00020
510193.12	4277549.61	2065.91374	0.00017	0.01249	2.63909E-07	0.04264	6.76981E-07	0.00017
510147.56	4277487.9	1887.42818	0.00016	0.01176	2.48484E-07	0.03720	5.90612E-07	0.00016
510241.24	4277332.5	1802.46312	0.00015	0.01318	2.78488E-07	0.04360	6.92222E-07	0.00015
510316.19	4277344.99	2099.65775	0.00017	0.01474	3.11451E-07	0.05466	8.67818E-07	0.00018
510275.41	4277252.05	1730.65847	0.00014	0.01292	2.72995E-07	0.04678	7.42710E-07	0.00014
510322.06	4277228.54	1820.37048	0.00015	0.01349	2.85039E-07	0.05308	8.42733E-07	0.00015
510168.14	4277155.06	1382.63194	0.00011	0.01228	2.59472E-07	0.03743	5.94263E-07	0.00012
510109.73	4277094.81	1160.7644	0.00010	0.01127	2.38131E-07	0.03127	4.96463E-07	0.00010
510170.34	4277081.59	1277.35556	0.00011	0.01209	2.55457E-07	0.03607	5.72671E-07	0.00011
510264.36	4276914.24	1642.34489	0.00014	0.01333	2.81658E-07	0.03981	6.32050E-07	0.00014
510199.1	4276903.44	1412.8277	0.00012	0.01223	2.58415E-07	0.03204	5.08688E-07	0.00012
510157.61	4276829.53	1364.63298	0.00011	0.01151	2.43202E-07	0.02610	4.14381E-07	0.00011
510201.26	4276808.79	1544.93274	0.00013	0.01209	2.55457E-07	0.02878	4.56930E-07	0.00013
510259.18	4276827.37	1762.85488	0.00015	0.01307	2.76164E-07	0.03504	5.56318E-07	0.00015
510308.02	4276868.86	1932.04903	0.00016	0.01406	2.97082E-07	0.04354	6.91270E-07	0.00016
510330.92	4276810.08	2201.42828	0.00018	0.01439	3.04055E-07	0.04372	6.94128E-07	0.00018
510353.4	4276998.95	1919.70339	0.00016	0.01509	3.18846E-07	0.05449	8.65119E-07	0.00016
510358.58	4276903.01	2159.52471	0.00018	0.01522	3.21593E-07	0.05393	8.56228E-07	0.00018
510463.34	4276900.64	2993.10559	0.00025	0.01756	3.71036E-07	0.07558	1.19996E-06	0.00025
510416.09	4276851.59	2734.77156	0.00023	0.01640	3.46526E-07	0.06300	1.00023E-06	0.00023
510411.3	4276825.86	2767.32005	0.00023	0.01621	3.42511E-07	0.06053	9.61014E-07	0.00023
510422.67	4276746.9	3068.83588	0.00025	0.01626	3.43568E-07	0.05726	9.09098E-07	0.00026
510452.36	4276669.61	3405.66723	0.00028	0.01678	3.54555E-07	0.05837	9.26721E-07	0.00028
510518.97	4276678.76	3953.44812	0.00033	0.01865	3.94067E-07	0.08129	1.29061E-06	0.00033
510563.21	4276656.9	4283.3644	0.00035	0.01992	4.20902E-07	0.09993	1.58655E-06	0.00036
510600.33	4276627.41	4528.32532	0.00038	0.02086	4.40764E-07	0.11940	1.89567E-06	0.00038
510571.86	4276593.85	4151.32453	0.00034	0.01969	4.16042E-07	0.09613	1.52622E-06	0.00035
510522.02	4276624.36	3861.71613	0.00032	0.01850	3.90898E-07	0.07658	1.21583E-06	0.00032
510525.92	4276534.3	3626.57068	0.00030	0.01795	3.79277E-07	0.07057	1.12042E-06	0.00030
510468.25	4276503.81	3226.64137	0.00027	0.01645	3.47582E-07	0.05393	8.56228E-07	0.00027
510476.7	4276581.69	3462.07091	0.00029	0.01709	3.61105E-07	0.05876	9.32913E-07	0.00029
510425.26	4276527.32	3083.6866	0.00026	0.01570	3.31735E-07	0.04595	7.29533E-07	0.00026
510398.44	4276557.45	2998.58666	0.00025	0.01525	3.22227E-07	0.04208	6.68090E-07	0.00025
510371.12	4276602	2860.96766	0.00024	0.01480	3.12718E-07	0.03917	6.21889E-07	0.00024
510328.51	4276635.8	2562.91957	0.00021	0.01403	2.96449E-07	0.03496	5.55048E-07	0.00021
510339.9	4276656.37	2604.6487	0.00022	0.01428	3.01731E-07	0.03707	5.88548E-07	0.00022
510329.33	4276697.73	2455.50389	0.00020	0.01415	2.98984E-07	0.03755	5.96169E-07	0.00020
511060.04	4278365.13	29067.49579	0.00241	0.33054	6.98418E-06	0.08404	1.33427E-06	0.00242
511053.55	4278281.17	34767.874	0.00288	0.29070	6.14238E-06	0.09372	1.48796E-06	0.00289
511449.69	4278012.31	62544.56303	0.00518	3.08774	6.52428E-05	0.08470	1.34475E-06	0.00525
511463.6	4278021.57	57698.67544	0.00478	2.47126	5.22168E-05	0.08101	1.28617E-06	0.00483
511584.5	4278030.79	36234.62211	0.00300	0.77163	1.63042E-05	0.06484	1.02944E-06	0.00302
511579.17	4278016.57	38128.10665	0.00316	0.81873	1.72995E-05	0.06661	1.05754E-06	0.00318
511643.38	4278010.53	31261.99102	0.00259	0.54131	1.14377E-05	0.06286	9.98007E-07	0.00260
511658.54	4277976.09	31627.947	0.00262	0.51476	1.08767E-05	0.06517	1.03468E-06	0.00263
511473.56	4278066.24	48627.45109	0.00403	1.91664	4.04979E-05	0.07504	1.19138E-06	0.00407
510844.05	4276334.61	6379.61927	0.00053	0.02347	4.95912E-07	0.67351	1.06931E-05	0.00054
510819	4276360.66	6245.67991	0.00052	0.02314	4.88939E-07	0.52416	8.32191E-06	0.00053
510812.25	4276338.82	6033.78023	0.00050	0.02264	4.78375E-07	0.43635	6.92778E-06	0.00051
510766.27	4276358.28	5595.00914	0.00046	0.02149	4.54076E-07	0.28350	4.50103E-06	0.00047
510788.08	4276480.9	6568.54062	0.00054	0.02363	4.99293E-07	0.52762	8.37684E-06	0.00055
510862.95	4276608.23	9322.43366	0.00077	0.02908	6.14449E-07	1.65367	2.62548E-05	0.00080
510849.39	4276591.14	8813.43259	0.00073	0.02813	5.94376E-07	1.35351	2.14892E-05	0.00075
510838.19	4276539.85	8000.7651	0.00066	0.02665	5.63104E-07	1.18290	1.87805E-05	0.00068

North Entry Area Plan Project

Cancer Risk Impacts from Construction at the Maximum Impacted Sensitive Receptor - Infant

Cancer Potency Factor: 1.1 (mg/kg-day)⁻¹
Exposure Frequency 350 days/year
Averaging Period 25550 days

Construction		Unit DPM Concentration	Age Sensitivity	Daily Breathing Rate	Time At Home	Exposure Duration	Unit Risk Factor
Year	Age	(ug/m3)	Factor	(L/kg-day)	Factor	(years)	(ug/m3) ⁻¹
2019	3rd Trimester	1	10	361	0.85	0.25	11.6
2019	0 to < 1 year old	1	10	1090	0.85	0.25	34.9
2020	0 to < 1 year old	1	10	1090	0.85	0.75	104.7
2020	1 to < 2 years old	1	10	1090	0.85	0.25	34.9
2021	1 to < 2 years old	1	10	1090	0.85	0.75	104.7
2021	2 to < 3 years old	1	3	572	0.72	0.25	4.7

BAAQMD 2016. Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines.

North Entry Area Plan Project

No Mitigation at Sensitive Receptors

Estimated Cancer Risks from Construction DPM - Infant Receptors

X (m)	Y (m)	Infant Cancer	Infant Cancer	Infant Cancer	Infant Cancer	Infant Cancer	Infant Cancer	Total Cancer Risk (/million)	Maximum Cancer Risk 4.826 BAAQMD threshold of significance 10 Exceed thresholds? No
		Risk (3rd Trimester)	Risk (0 years)	Risk (0 years)	Risk (1 year old)	Risk (1 year old)	Risk (2 years old)		
		2019 (/million)	2019 (/million)	2020 (/million)	2020 (/million)	2021 (/million)	2021 (/million)		
511141.17	4277077.82	0.294	0.889	1.749	0.583	1.255	0.056	4.82617	
511177.3	4277063.56	0.279	0.842	1.653	0.551	1.188	0.053	4.56574	
511115.23	4277044.7	0.213	0.642	1.269	0.423	0.909	0.040	3.49685	
511127.93	4277027.53	0.199	0.600	1.184	0.395	0.849	0.038	3.26512	
511112.48	4276990.1	0.148	0.448	0.888	0.296	0.636	0.028	2.44520	
511152.66	4277006.58	0.190	0.574	1.130	0.377	0.811	0.036	3.11729	
511185.29	4276993.19	0.190	0.574	1.126	0.375	0.809	0.036	3.11021	
511245.73	4277021.01	0.220	0.663	1.299	0.433	0.934	0.042	3.59095	
511278.7	4277033.03	0.223	0.672	1.316	0.439	0.946	0.042	3.63700	
511308.58	4277036.12	0.215	0.650	1.272	0.424	0.915	0.041	3.51781	
511319.91	4277044.7	0.218	0.657	1.285	0.428	0.925	0.041	3.55377	
511336.05	4277053.98	0.218	0.657	1.286	0.429	0.925	0.041	3.55456	
511350.3	4277017.64	0.189	0.571	1.118	0.373	0.804	0.036	3.08975	
511371.36	4277040.35	0.194	0.586	1.147	0.382	0.825	0.037	3.17146	
511359.18	4277004.82	0.179	0.542	1.061	0.354	0.763	0.034	2.93222	
511380.24	4277027.53	0.184	0.555	1.086	0.362	0.781	0.035	3.00222	
511370.17	4276993.1	0.170	0.515	1.007	0.336	0.724	0.032	2.78478	
511391.78	4277015.07	0.173	0.524	1.025	0.342	0.737	0.033	2.83399	
511417.05	4277042.36	0.175	0.530	1.037	0.346	0.746	0.033	2.86668	
511377.68	4276982.47	0.164	0.494	0.966	0.322	0.695	0.031	2.67127	
511400.94	4277005	0.166	0.501	0.980	0.327	0.705	0.031	2.70894	
511412.84	4276995.66	0.158	0.477	0.934	0.311	0.672	0.030	2.58169	
511437.57	4277020.75	0.158	0.478	0.936	0.312	0.673	0.030	2.58689	
511426.67	4277032.47	0.167	0.505	0.988	0.329	0.711	0.032	2.73172	
511447.91	4277011.04	0.151	0.456	0.893	0.298	0.642	0.029	2.46857	
511458.35	4276998.96	0.144	0.434	0.848	0.283	0.610	0.027	2.34572	
511467.33	4276989.25	0.138	0.416	0.814	0.271	0.586	0.026	2.25111	
511477.22	4276977.16	0.131	0.397	0.777	0.259	0.559	0.025	2.14697	
511488.57	4276969.65	0.126	0.381	0.745	0.248	0.536	0.024	2.06036	
511498.09	4276955.18	0.120	0.363	0.709	0.236	0.510	0.023	1.96152	
511388.39	4276972.03	0.156	0.472	0.923	0.308	0.664	0.030	2.55158	
511399.38	4276962.14	0.149	0.451	0.883	0.294	0.635	0.028	2.44099	
511400.53	4278315.27	0.064	0.195	0.391	0.130	0.278	0.012	1.07041	
511340.62	4278311.18	0.072	0.216	0.449	0.150	0.315	0.014	1.21572	
511345.14	4278296.52	0.074	0.222	0.460	0.153	0.324	0.014	1.24748	
511364.54	4278312.47	0.069	0.208	0.424	0.141	0.300	0.013	1.15623	
511209.12	4276947.27	0.160	0.482	0.945	0.315	0.679	0.030	2.61084	
511176.13	4276927.62	0.136	0.410	0.807	0.269	0.579	0.026	2.22743	
511219.65	4276925.86	0.148	0.448	0.879	0.293	0.632	0.028	2.42880	
511196.49	4276892.17	0.124	0.374	0.734	0.245	0.528	0.023	2.02815	
511003.4	4276731.86	0.036	0.108	0.251	0.084	0.169	0.008	0.65507	
510998.1	4276717.84	0.034	0.103	0.244	0.081	0.163	0.007	0.63197	
511028.47	4276724.85	0.039	0.116	0.248	0.083	0.173	0.008	0.66599	
511051.99	4276724.69	0.042	0.127	0.261	0.087	0.184	0.008	0.70909	
511131.57	4276736.84	0.059	0.178	0.352	0.117	0.252	0.011	0.96972	

511001.84	4276671.43	0.031	0.095	0.214	0.071	0.146	0.006	0.56374
511001.84	4276650.09	0.030	0.091	0.204	0.068	0.139	0.006	0.53696
511020.22	4276632.96	0.031	0.092	0.198	0.066	0.137	0.006	0.52986
511038.75	4276665.82	0.035	0.106	0.221	0.074	0.155	0.007	0.59676
511039.53	4276636.23	0.033	0.100	0.207	0.069	0.145	0.006	0.56089
511082.2	4276682.64	0.043	0.128	0.259	0.086	0.184	0.008	0.70796
511107.74	4276673.92	0.046	0.138	0.276	0.092	0.197	0.009	0.75711
511082.67	4276634.05	0.038	0.116	0.233	0.078	0.166	0.007	0.63815
511110.54	4276628.29	0.042	0.125	0.250	0.083	0.179	0.008	0.68730
511127.99	4276630.94	0.044	0.134	0.265	0.088	0.190	0.008	0.72935
511125.03	4276675.95	0.049	0.148	0.294	0.098	0.210	0.009	0.80744
511144.81	4276679.06	0.053	0.159	0.316	0.105	0.226	0.010	0.86892
511150.72	4276637.95	0.048	0.146	0.288	0.096	0.206	0.009	0.79334
511169.1	4276687.47	0.058	0.176	0.347	0.116	0.249	0.011	0.95727
511171.75	4276641.37	0.052	0.156	0.307	0.102	0.220	0.010	0.84715
510972.24	4276568.62	0.024	0.072	0.176	0.059	0.116	0.005	0.45206
510970.09	4276558.27	0.023	0.070	0.173	0.058	0.114	0.005	0.44308
510968.79	4276547.92	0.023	0.069	0.170	0.057	0.112	0.005	0.43493
510965.99	4276537.57	0.022	0.067	0.168	0.056	0.110	0.005	0.42833
510988.84	4276570.99	0.025	0.075	0.171	0.057	0.116	0.005	0.44994
510985.39	4276561.72	0.024	0.073	0.169	0.056	0.114	0.005	0.44123
511025.27	4276572.93	0.028	0.083	0.176	0.059	0.123	0.005	0.47398
511039.72	4276569.26	0.029	0.087	0.181	0.060	0.127	0.006	0.48921
511021.39	4276549	0.026	0.079	0.167	0.056	0.116	0.005	0.44919
511014.5	4276530.03	0.025	0.075	0.160	0.053	0.111	0.005	0.42874
511041.66	4276545.12	0.028	0.084	0.173	0.058	0.122	0.005	0.46952
511034.33	4276536.5	0.027	0.080	0.167	0.056	0.117	0.005	0.45303
510959.53	4276510.2	0.021	0.063	0.163	0.054	0.106	0.005	0.41292
510971.81	4276510.84	0.022	0.065	0.156	0.052	0.104	0.005	0.40374
510964.91	4276497.69	0.021	0.063	0.156	0.052	0.103	0.005	0.39871
510962.11	4276476.57	0.020	0.061	0.152	0.051	0.100	0.004	0.38747
510962.54	4276462.34	0.020	0.059	0.148	0.049	0.097	0.004	0.37851
511001.78	4276503.3	0.023	0.069	0.151	0.050	0.104	0.005	0.40188
510995.74	4276530.46	0.024	0.071	0.158	0.053	0.108	0.005	0.41867
511026.57	4276504.16	0.025	0.074	0.155	0.052	0.109	0.005	0.41881
511041.44	4276504.59	0.026	0.078	0.160	0.053	0.113	0.005	0.43552
511034.33	4276471.61	0.024	0.072	0.149	0.050	0.105	0.005	0.40364
511029.15	4276461.26	0.023	0.069	0.145	0.048	0.102	0.005	0.39178
511013.2	4276427.63	0.021	0.063	0.134	0.045	0.094	0.004	0.36156
511012.5	4276387.62	0.020	0.060	0.126	0.042	0.088	0.004	0.34018
511077.94	4276401.42	0.024	0.073	0.148	0.049	0.105	0.005	0.40401
511037.26	4276343.4	0.020	0.060	0.122	0.041	0.086	0.004	0.33199
511102.71	4276389.03	0.025	0.077	0.153	0.051	0.109	0.005	0.41932
511104.83	4276341.98	0.023	0.071	0.141	0.047	0.101	0.004	0.38683
511099.17	4276325	0.022	0.067	0.135	0.045	0.096	0.004	0.36989
511149.05	4276347.29	0.026	0.078	0.155	0.052	0.111	0.005	0.42755
511175.94	4276353.3	0.028	0.084	0.165	0.055	0.118	0.005	0.45550
511200.71	4276325.35	0.028	0.083	0.165	0.055	0.118	0.005	0.45388
511144.81	4276305.9	0.024	0.072	0.143	0.048	0.102	0.005	0.39418
511132.43	4276291.39	0.023	0.068	0.136	0.045	0.097	0.004	0.37409
511089.62	4276270.16	0.020	0.059	0.119	0.040	0.085	0.004	0.32627
511056.01	4276256.72	0.018	0.054	0.109	0.036	0.078	0.003	0.29882
511114.38	4276223.11	0.019	0.058	0.116	0.039	0.083	0.004	0.31930

511056.01	4276193.39	0.016	0.049	0.099	0.033	0.071	0.003	0.27228
511065.21	4276110.96	0.015	0.045	0.090	0.030	0.065	0.003	0.24832
511120.4	4276103.53	0.016	0.050	0.098	0.033	0.070	0.003	0.27053
511146.58	4276086.91	0.017	0.051	0.100	0.033	0.072	0.003	0.27616
511054.6	4276057.54	0.014	0.042	0.083	0.028	0.059	0.003	0.22840
511079.71	4276059.31	0.014	0.044	0.087	0.029	0.062	0.003	0.23895
511063.79	4276032.07	0.014	0.041	0.082	0.027	0.059	0.003	0.22521
511091.03	4276029.59	0.014	0.043	0.085	0.028	0.061	0.003	0.23508
511112.26	4276047.99	0.015	0.046	0.090	0.030	0.065	0.003	0.24886
511148.35	4276034.55	0.016	0.048	0.094	0.031	0.067	0.003	0.25933
511187.26	4276047.99	0.017	0.051	0.102	0.034	0.073	0.003	0.28039
511099.18	4276852.79	0.074	0.224	0.448	0.149	0.319	0.014	1.22842
511091.4	4276809.98	0.062	0.187	0.375	0.125	0.267	0.012	1.02635
511126.42	4276783.8	0.066	0.200	0.397	0.132	0.284	0.013	1.09175
511155.44	4276841.83	0.091	0.273	0.539	0.180	0.387	0.017	1.48719
511197.19	4276843.95	0.103	0.312	0.613	0.204	0.440	0.020	1.69202
511240	4276846.07	0.113	0.340	0.667	0.222	0.479	0.021	1.84233
511290.59	4276850.67	0.118	0.358	0.701	0.234	0.504	0.022	1.93725
511322.08	4276852.44	0.119	0.361	0.707	0.236	0.508	0.023	1.95299
511271.92	4276788.58	0.096	0.290	0.568	0.189	0.409	0.018	1.57069
511269.62	4276751.13	0.085	0.258	0.506	0.169	0.363	0.016	1.39706
511286.9	4276724.63	0.081	0.244	0.478	0.159	0.343	0.015	1.31940
511322.05	4276714.26	0.081	0.244	0.478	0.159	0.344	0.015	1.32111
511347.4	4276753.44	0.091	0.273	0.536	0.179	0.385	0.017	1.48031
511324.93	4276787.43	0.099	0.299	0.585	0.195	0.420	0.019	1.61617
511395.79	4276750.56	0.090	0.270	0.529	0.176	0.381	0.017	1.46283
511433.82	4276788.58	0.096	0.289	0.565	0.188	0.406	0.018	1.56252
511474.15	4276802.99	0.094	0.285	0.558	0.186	0.402	0.018	1.54345
511455.71	4276828.34	0.102	0.307	0.601	0.200	0.432	0.019	1.66177
511396.49	4276844.26	0.112	0.339	0.664	0.221	0.478	0.021	1.83552
511369.02	4276870.9	0.123	0.372	0.728	0.243	0.524	0.023	2.01233
511333.22	4276911.69	0.142	0.429	0.839	0.280	0.604	0.027	2.32033
511305.33	4276950.31	0.163	0.494	0.966	0.322	0.695	0.031	2.67097
511416.46	4276868.95	0.117	0.352	0.690	0.230	0.496	0.022	1.90643
511406.83	4276881.28	0.122	0.367	0.718	0.239	0.517	0.023	1.98565
511400.52	4276896.01	0.127	0.383	0.750	0.250	0.539	0.024	2.07344
511389.39	4276913.76	0.135	0.406	0.795	0.265	0.572	0.025	2.19833
511368.34	4276928.8	0.144	0.434	0.850	0.283	0.611	0.027	2.34977
511356.31	4276946.84	0.153	0.463	0.906	0.302	0.652	0.029	2.50529
511350.29	4276960.98	0.161	0.485	0.950	0.317	0.683	0.030	2.62676
511337.96	4276975.41	0.170	0.514	1.007	0.336	0.724	0.032	2.78374
511320.22	4276989.55	0.182	0.550	1.076	0.359	0.774	0.034	2.97389
511421.25	4276982.31	0.150	0.454	0.889	0.296	0.639	0.028	2.45734
511435.82	4276972.74	0.143	0.431	0.844	0.281	0.607	0.027	2.33249
511407.51	4276951.92	0.144	0.434	0.849	0.283	0.611	0.027	2.34707
511416.67	4276936.52	0.136	0.412	0.806	0.269	0.580	0.026	2.22766
511441.65	4276961.5	0.138	0.416	0.813	0.271	0.585	0.026	2.24806
511428.75	4276926.11	0.130	0.394	0.771	0.257	0.554	0.025	2.13052
511451.64	4276947.34	0.131	0.395	0.773	0.258	0.556	0.025	2.13703
511435.82	4276912.79	0.125	0.378	0.739	0.246	0.532	0.024	2.04332
511462.88	4276936.52	0.125	0.378	0.739	0.246	0.532	0.024	2.04303
510943.27	4276699.02	0.027	0.083	0.188	0.063	0.128	0.006	0.49451
510940.61	4276686.09	0.027	0.080	0.184	0.061	0.124	0.006	0.48133

510936.99	4276669.16	0.026	0.077	0.178	0.059	0.120	0.005	0.46461
510931.47	4276639.48	0.024	0.072	0.168	0.056	0.113	0.005	0.43920
510924.06	4276619.89	0.023	0.069	0.158	0.053	0.107	0.005	0.41391
510637	4276777.21	0.011	0.034	0.067	0.022	0.048	0.002	0.18435
510548.73	4276774.18	0.009	0.027	0.053	0.018	0.038	0.002	0.14511
510547.21	4276898.28	0.008	0.024	0.047	0.016	0.033	0.001	0.12870
510551.25	4276958.3	0.007	0.022	0.043	0.014	0.031	0.001	0.11747
510650.62	4277053.14	0.010	0.029	0.057	0.019	0.041	0.002	0.15692
510672.82	4277035.48	0.011	0.033	0.065	0.022	0.047	0.002	0.17922
510685.93	4277000.17	0.012	0.037	0.073	0.024	0.052	0.002	0.20122
510709.64	4277123.25	0.011	0.035	0.069	0.023	0.049	0.002	0.18907
510551.75	4277065.75	0.006	0.019	0.037	0.012	0.026	0.001	0.10188
510585.55	4277002.69	0.008	0.023	0.045	0.015	0.032	0.001	0.12472
510681.05	4277526.3	0.017	0.052	0.103	0.034	0.074	0.003	0.28322
510602.09	4277543.05	0.011	0.034	0.068	0.023	0.049	0.002	0.18665
510585.34	4277602.27	0.012	0.037	0.073	0.024	0.052	0.002	0.20069
510520.14	4277627.4	0.010	0.030	0.059	0.020	0.042	0.002	0.16278
510477.07	4277653.12	0.009	0.028	0.055	0.018	0.039	0.002	0.15077
510525.39	4277547.1	0.008	0.025	0.049	0.016	0.035	0.002	0.13439
510511.13	4277494.37	0.007	0.021	0.041	0.014	0.029	0.001	0.11314
510485.63	4277496.53	0.006	0.019	0.038	0.013	0.027	0.001	0.10551
510439.39	4277515.55	0.006	0.018	0.036	0.012	0.026	0.001	0.09874
510369.82	4277592.96	0.006	0.019	0.038	0.013	0.027	0.001	0.10557
510394.07	4277635.94	0.007	0.022	0.043	0.014	0.031	0.001	0.11951
510368.35	4277565.04	0.006	0.018	0.036	0.012	0.026	0.001	0.09983
510301.12	4277596.64	0.005	0.017	0.033	0.011	0.023	0.001	0.09003
510299.29	4277636.31	0.006	0.017	0.034	0.011	0.024	0.001	0.09333
510267.33	4277553.29	0.005	0.015	0.029	0.010	0.021	0.001	0.07995
510193.12	4277549.61	0.004	0.013	0.025	0.008	0.018	0.001	0.06928
510147.56	4277487.9	0.004	0.012	0.023	0.008	0.016	0.001	0.06329
510241.24	4277332.5	0.004	0.011	0.022	0.007	0.016	0.001	0.06051
510316.19	4277344.99	0.004	0.013	0.026	0.009	0.018	0.001	0.07051
510275.41	4277252.05	0.004	0.011	0.021	0.007	0.015	0.001	0.05814
510322.06	4277228.54	0.004	0.011	0.022	0.007	0.016	0.001	0.06118
510168.14	4277155.06	0.003	0.009	0.017	0.006	0.012	0.001	0.04647
510109.73	4277094.81	0.002	0.007	0.014	0.005	0.010	0.000	0.03902
510170.34	4277081.59	0.003	0.008	0.016	0.005	0.011	0.000	0.04295
510264.36	4276914.24	0.003	0.010	0.020	0.007	0.014	0.001	0.05515
510199.1	4276903.44	0.003	0.009	0.017	0.006	0.012	0.001	0.04744
510157.61	4276829.53	0.003	0.008	0.017	0.006	0.012	0.001	0.04578
510201.26	4276808.79	0.003	0.010	0.019	0.006	0.013	0.001	0.05182
510259.18	4276827.37	0.004	0.011	0.021	0.007	0.015	0.001	0.05913
510308.02	4276868.86	0.004	0.012	0.024	0.008	0.017	0.001	0.06484
510330.92	4276810.08	0.005	0.014	0.027	0.009	0.019	0.001	0.07383
510353.4	4276998.95	0.004	0.012	0.023	0.008	0.017	0.001	0.06452
510358.58	4276903.01	0.004	0.013	0.026	0.009	0.019	0.001	0.07251
510463.34	4276900.64	0.006	0.018	0.036	0.012	0.026	0.001	0.10047
510416.09	4276851.59	0.006	0.017	0.033	0.011	0.024	0.001	0.09176
510411.3	4276825.86	0.006	0.017	0.034	0.011	0.024	0.001	0.09283
510422.67	4276746.9	0.006	0.019	0.037	0.012	0.027	0.001	0.10286
510452.36	4276669.61	0.007	0.021	0.041	0.014	0.030	0.001	0.11410
510518.97	4276678.76	0.008	0.024	0.048	0.016	0.034	0.002	0.13254
510563.21	4276656.9	0.009	0.026	0.052	0.017	0.037	0.002	0.14368

510600.33	4276627.41	0.009	0.028	0.055	0.018	0.040	0.002	0.15199
510571.86	4276593.85	0.008	0.026	0.050	0.017	0.036	0.002	0.13924
510522.02	4276624.36	0.008	0.024	0.047	0.016	0.034	0.001	0.12944
510525.92	4276534.3	0.007	0.022	0.044	0.015	0.032	0.001	0.12156
510468.25	4276503.81	0.007	0.020	0.039	0.013	0.028	0.001	0.10810
510476.7	4276581.69	0.007	0.021	0.042	0.014	0.030	0.001	0.11598
510425.26	4276527.32	0.006	0.019	0.037	0.012	0.027	0.001	0.10327
510398.44	4276557.45	0.006	0.019	0.036	0.012	0.026	0.001	0.10040
510371.12	4276602	0.006	0.018	0.035	0.012	0.025	0.001	0.09579
510328.51	4276635.8	0.005	0.016	0.031	0.010	0.022	0.001	0.08581
510339.9	4276656.37	0.005	0.016	0.032	0.011	0.023	0.001	0.08722
510329.33	4276697.73	0.005	0.015	0.030	0.010	0.021	0.001	0.08225
511060.04	4278365.13	0.059	0.179	0.352	0.117	0.253	0.011	0.97269
511053.55	4278281.17	0.071	0.215	0.421	0.140	0.302	0.013	1.16243
511449.69	4278012.31	0.128	0.386	0.770	0.257	0.550	0.024	2.11416
511463.6	4278021.57	0.118	0.356	0.708	0.236	0.506	0.022	1.94690
511584.5	4278030.79	0.074	0.224	0.441	0.147	0.316	0.014	1.21556
511579.17	4278016.57	0.078	0.235	0.464	0.155	0.333	0.015	1.27913
511643.38	4278010.53	0.064	0.193	0.380	0.127	0.272	0.012	1.04764
511658.54	4277976.09	0.065	0.195	0.384	0.128	0.276	0.012	1.05961
511473.56	4278066.24	0.099	0.300	0.596	0.199	0.426	0.019	1.63933
510844.05	4276334.61	0.013	0.039	0.080	0.027	0.057	0.003	0.21756
510819	4276360.66	0.013	0.039	0.077	0.026	0.055	0.002	0.21206
510812.25	4276338.82	0.012	0.037	0.074	0.025	0.053	0.002	0.20438
510766.27	4276358.28	0.011	0.035	0.069	0.023	0.049	0.002	0.18869
510788.08	4276480.9	0.013	0.041	0.081	0.027	0.058	0.003	0.22285
510862.95	4276608.23	0.019	0.058	0.119	0.040	0.084	0.004	0.32251
510849.39	4276591.14	0.018	0.054	0.112	0.037	0.079	0.004	0.30345
510838.19	4276539.85	0.016	0.049	0.101	0.034	0.071	0.003	0.27517

North Entry Area Plan Project

Unmitigated

Cancer Risk Impacts from Construction at the Maximum Impacted Sensitive Receptor - Child

Cancer Potency Factor: 1.1 (mg/kg-day)⁻¹
Exposure Frequency 350 days/year
Averaging Period 25550 days

Construction	DPM Concentration	Age Sensitivity	Daily Breathing Rate	Time At Home	Exposure Duration	Unit Risk Factor
Year	(ug/m3)	Factor	(L/kg-day)	Factor	(years)	(ug/m3) ⁻¹
2019	1	3	572	0.72	0.5	9.3
2020	1	3	572	0.72	1	18.6
2021	1	3	572	0.72	0.5	9.3

BAAQMD 2016. Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines

North Entry Area Plan Project

No Mitigation at Sensitive Receptors

Estimated Cancer Risks from Construction DPM - Child Receptors

X (m)	Y (m)	Child Cancer Risk 2019 (/million)	Child Cancer Risk 2020 (/million)	Child Cancer Risk 2021 (/million)	Total Cancer Risk (/million)	Maximum Cancer Risk
511141.17	4277077.82	0.237	0.311	0.112	0.65963	0.66
511177.3	4277063.56	0.225	0.294	0.106	0.62416	BAAQMD threshold of significance
511115.23	4277044.7	0.171	0.226	0.081	0.47777	10
511127.93	4277027.53	0.160	0.211	0.075	0.44618	Exceed thresholds?
511112.48	4276990.1	0.120	0.158	0.057	0.33403	No
511152.66	4277006.58	0.153	0.201	0.072	0.42607	
511185.29	4276993.19	0.153	0.200	0.072	0.42517	
511245.73	4277021.01	0.177	0.231	0.083	0.49096	
511278.7	4277033.03	0.179	0.234	0.084	0.49727	
511308.58	4277036.12	0.173	0.226	0.081	0.48099	
511319.91	4277044.7	0.175	0.229	0.082	0.48591	
511336.05	4277053.98	0.175	0.229	0.082	0.48602	
511350.3	4277017.64	0.152	0.199	0.071	0.42246	
511371.36	4277040.35	0.156	0.204	0.073	0.43364	
511359.18	4277004.82	0.145	0.189	0.068	0.40092	
511380.24	4277027.53	0.148	0.193	0.069	0.41050	
511370.17	4276993.1	0.137	0.179	0.064	0.38077	
511391.78	4277015.07	0.140	0.182	0.066	0.38750	
511417.05	4277042.36	0.141	0.184	0.066	0.39197	
511377.68	4276982.47	0.132	0.172	0.062	0.36524	
511400.94	4277005	0.134	0.174	0.063	0.37040	
511412.84	4276995.66	0.127	0.166	0.060	0.35300	
511437.57	4277020.75	0.128	0.166	0.060	0.35371	
511426.67	4277032.47	0.135	0.176	0.063	0.37351	
511447.91	4277011.04	0.122	0.159	0.057	0.33753	
511458.35	4276998.96	0.116	0.151	0.054	0.32073	
511467.33	4276989.25	0.111	0.145	0.052	0.30780	
511477.22	4276977.16	0.106	0.138	0.050	0.29356	
511488.57	4276969.65	0.102	0.132	0.048	0.28171	
511498.09	4276955.18	0.097	0.126	0.045	0.26820	
511388.39	4276972.03	0.126	0.164	0.059	0.34888	
511399.38	4276962.14	0.120	0.157	0.056	0.33376	

511400.53	4278315.27	0.052	0.069	0.025	0.14609
511340.62	4278311.18	0.058	0.080	0.028	0.16550
511345.14	4278296.52	0.059	0.082	0.029	0.16986
511364.54	4278312.47	0.056	0.075	0.027	0.15764
511209.12	4276947.27	0.129	0.168	0.060	0.35692
511176.13	4276927.62	0.109	0.143	0.052	0.30446
511219.65	4276925.86	0.120	0.156	0.056	0.33204
511196.49	4276892.17	0.100	0.131	0.047	0.27724
511003.4	4276731.86	0.029	0.045	0.015	0.08849
510998.1	4276717.84	0.027	0.043	0.014	0.08525
511028.47	4276724.85	0.031	0.044	0.015	0.09050
511051.99	4276724.69	0.034	0.046	0.016	0.09659
511131.57	4276736.84	0.047	0.063	0.022	0.13246
511001.84	4276671.43	0.025	0.038	0.013	0.07628
511001.84	4276650.09	0.024	0.036	0.012	0.07270
511020.22	4276632.96	0.025	0.035	0.012	0.07199
511038.75	4276665.82	0.028	0.039	0.014	0.08122
511039.53	4276636.23	0.027	0.037	0.013	0.07636
511082.2	4276682.64	0.034	0.046	0.016	0.09659
511107.74	4276673.92	0.037	0.049	0.017	0.10337
511082.67	4276634.05	0.031	0.041	0.015	0.08707
511110.54	4276628.29	0.033	0.044	0.016	0.09385
511127.99	4276630.94	0.036	0.047	0.017	0.09962
511125.03	4276675.95	0.039	0.052	0.019	0.11028
511144.81	4276679.06	0.043	0.056	0.020	0.11871
511150.72	4276637.95	0.039	0.051	0.018	0.10839
511169.1	4276687.47	0.047	0.062	0.022	0.13081
511171.75	4276641.37	0.042	0.055	0.020	0.11576
510972.24	4276568.62	0.019	0.031	0.010	0.06081
510970.09	4276558.27	0.019	0.031	0.010	0.05958
510968.79	4276547.92	0.018	0.030	0.010	0.05848
510965.99	4276537.57	0.018	0.030	0.010	0.05755
510988.84	4276570.99	0.020	0.030	0.010	0.06085
510985.39	4276561.72	0.020	0.030	0.010	0.05964
511025.27	4276572.93	0.022	0.031	0.011	0.06446
511039.72	4276569.26	0.023	0.032	0.011	0.06661
511021.39	4276549	0.021	0.030	0.010	0.06108
511014.5	4276530.03	0.020	0.028	0.010	0.05826
511041.66	4276545.12	0.022	0.031	0.011	0.06395
511034.33	4276536.5	0.021	0.030	0.010	0.06167
510959.53	4276510.2	0.017	0.029	0.009	0.05537

510971.81	4276510.84	0.017	0.028	0.009	0.05442
510964.91	4276497.69	0.017	0.028	0.009	0.05361
510962.11	4276476.57	0.016	0.027	0.009	0.05206
510962.54	4276462.34	0.016	0.026	0.009	0.05087
511001.78	4276503.3	0.019	0.027	0.009	0.05454
510995.74	4276530.46	0.019	0.028	0.010	0.05675
511026.57	4276504.16	0.020	0.028	0.010	0.05698
511041.44	4276504.59	0.021	0.029	0.010	0.05932
511034.33	4276471.61	0.019	0.027	0.009	0.05495
511029.15	4276461.26	0.019	0.026	0.009	0.05332
511013.2	4276427.63	0.017	0.024	0.008	0.04915
511012.5	4276387.62	0.016	0.022	0.008	0.04626
511077.94	4276401.42	0.020	0.026	0.009	0.05513
511037.26	4276343.4	0.016	0.022	0.008	0.04524
511102.71	4276389.03	0.020	0.027	0.010	0.05726
511104.83	4276341.98	0.019	0.025	0.009	0.05282
511099.17	4276325	0.018	0.024	0.009	0.05050
511149.05	4276347.29	0.021	0.028	0.010	0.05841
511175.94	4276353.3	0.022	0.029	0.011	0.06224
511200.71	4276325.35	0.022	0.029	0.010	0.06202
511144.81	4276305.9	0.019	0.025	0.009	0.05384
511132.43	4276291.39	0.018	0.024	0.009	0.05109
511089.62	4276270.16	0.016	0.021	0.008	0.04453
511056.01	4276256.72	0.014	0.019	0.007	0.04076
511114.38	4276223.11	0.016	0.021	0.007	0.04360
511056.01	4276193.39	0.013	0.018	0.006	0.03715
511065.21	4276110.96	0.012	0.016	0.006	0.03390
511120.4	4276103.53	0.013	0.017	0.006	0.03695
511146.58	4276086.91	0.013	0.018	0.006	0.03772
511054.6	4276057.54	0.011	0.015	0.005	0.03119
511079.71	4276059.31	0.012	0.015	0.006	0.03263
511063.79	4276032.07	0.011	0.015	0.005	0.03076
511091.03	4276029.59	0.011	0.015	0.005	0.03211
511112.26	4276047.99	0.012	0.016	0.006	0.03399
511148.35	4276034.55	0.013	0.017	0.006	0.03543
511187.26	4276047.99	0.014	0.018	0.006	0.03831
511099.18	4276852.79	0.060	0.080	0.028	0.16770
511091.4	4276809.98	0.050	0.067	0.024	0.14007
511126.42	4276783.8	0.053	0.071	0.025	0.14912
511155.44	4276841.83	0.073	0.096	0.034	0.20323
511197.19	4276843.95	0.083	0.109	0.039	0.23128

511240	4276846.07	0.091	0.119	0.043	0.25186
511290.59	4276850.67	0.095	0.125	0.045	0.26486
511322.08	4276852.44	0.096	0.126	0.045	0.26702
511271.92	4276788.58	0.077	0.101	0.036	0.21473
511269.62	4276751.13	0.069	0.090	0.032	0.19099
511286.9	4276724.63	0.065	0.085	0.031	0.18038
511322.05	4276714.26	0.065	0.085	0.031	0.18062
511347.4	4276753.44	0.073	0.095	0.034	0.20239
511324.93	4276787.43	0.080	0.104	0.037	0.22096
511395.79	4276750.56	0.072	0.094	0.034	0.20001
511433.82	4276788.58	0.077	0.100	0.036	0.21364
511474.15	4276802.99	0.076	0.099	0.036	0.21104
511455.71	4276828.34	0.082	0.107	0.038	0.22721
511396.49	4276844.26	0.090	0.118	0.042	0.25097
511369.02	4276870.9	0.099	0.129	0.047	0.27514
511333.22	4276911.69	0.114	0.149	0.054	0.31725
511305.33	4276950.31	0.132	0.172	0.062	0.36519
511416.46	4276868.95	0.094	0.123	0.044	0.26067
511406.83	4276881.28	0.098	0.128	0.046	0.27150
511400.52	4276896.01	0.102	0.133	0.048	0.28350
511389.39	4276913.76	0.108	0.141	0.051	0.30058
511368.34	4276928.8	0.116	0.151	0.054	0.32128
511356.31	4276946.84	0.123	0.161	0.058	0.34255
511350.29	4276960.98	0.129	0.169	0.061	0.35916
511337.96	4276975.41	0.137	0.179	0.064	0.38062
511320.22	4276989.55	0.147	0.191	0.069	0.40662
511421.25	4276982.31	0.121	0.158	0.057	0.33600
511435.82	4276972.74	0.115	0.150	0.054	0.31892
511407.51	4276951.92	0.116	0.151	0.054	0.32092
511416.67	4276936.52	0.110	0.143	0.052	0.30459
511441.65	4276961.5	0.111	0.145	0.052	0.30738
511428.75	4276926.11	0.105	0.137	0.049	0.29131
511451.64	4276947.34	0.105	0.137	0.049	0.29220
511435.82	4276912.79	0.101	0.131	0.047	0.27939
511462.88	4276936.52	0.101	0.131	0.047	0.27935
510943.27	4276699.02	0.022	0.034	0.011	0.06688
510940.61	4276686.09	0.021	0.033	0.011	0.06508
510936.99	4276669.16	0.021	0.032	0.011	0.06279
510931.47	4276639.48	0.019	0.030	0.010	0.05931
510924.06	4276619.89	0.018	0.028	0.009	0.05593
510637	4276777.21	0.009	0.012	0.004	0.02519

510548.73	4276774.18	0.007	0.009	0.003	0.01983
510547.21	4276898.28	0.006	0.008	0.003	0.01759
510551.25	4276958.3	0.006	0.008	0.003	0.01605
510650.62	4277053.14	0.008	0.010	0.004	0.02144
510672.82	4277035.48	0.009	0.012	0.004	0.02449
510685.93	4277000.17	0.010	0.013	0.005	0.02749
510709.64	4277123.25	0.009	0.012	0.004	0.02583
510551.75	4277065.75	0.005	0.007	0.002	0.01392
510585.55	4277002.69	0.006	0.008	0.003	0.01704
510681.05	4277526.3	0.014	0.018	0.007	0.03871
510602.09	4277543.05	0.009	0.012	0.004	0.02551
510585.34	4277602.27	0.010	0.013	0.005	0.02743
510520.14	4277627.4	0.008	0.010	0.004	0.02225
510477.07	4277653.12	0.007	0.010	0.003	0.02061
510525.39	4277547.1	0.007	0.009	0.003	0.01837
510511.13	4277494.37	0.006	0.007	0.003	0.01546
510485.63	4277496.53	0.005	0.007	0.002	0.01442
510439.39	4277515.55	0.005	0.006	0.002	0.01349
510369.82	4277592.96	0.005	0.007	0.002	0.01443
510394.07	4277635.94	0.006	0.008	0.003	0.01634
510368.35	4277565.04	0.005	0.006	0.002	0.01364
510301.12	4277596.64	0.004	0.006	0.002	0.01230
510299.29	4277636.31	0.005	0.006	0.002	0.01276
510267.33	4277553.29	0.004	0.005	0.002	0.01093
510193.12	4277549.61	0.003	0.004	0.002	0.00947
510147.56	4277487.9	0.003	0.004	0.001	0.00865
510241.24	4277332.5	0.003	0.004	0.001	0.00827
510316.19	4277344.99	0.003	0.005	0.002	0.00964
510275.41	4277252.05	0.003	0.004	0.001	0.00794
510322.06	4277228.54	0.003	0.004	0.001	0.00836
510168.14	4277155.06	0.002	0.003	0.001	0.00635
510109.73	4277094.81	0.002	0.003	0.001	0.00533
510170.34	4277081.59	0.002	0.003	0.001	0.00587
510264.36	4276914.24	0.003	0.004	0.001	0.00754
510199.1	4276903.44	0.002	0.003	0.001	0.00648
510157.61	4276829.53	0.002	0.003	0.001	0.00626
510201.26	4276808.79	0.003	0.003	0.001	0.00708
510259.18	4276827.37	0.003	0.004	0.001	0.00808
510308.02	4276868.86	0.003	0.004	0.001	0.00886
510330.92	4276810.08	0.004	0.005	0.002	0.01009
510353.4	4276998.95	0.003	0.004	0.001	0.00882

510358.58	4276903.01	0.004	0.005	0.002	0.00991
510463.34	4276900.64	0.005	0.006	0.002	0.01373
510416.09	4276851.59	0.005	0.006	0.002	0.01254
510411.3	4276825.86	0.005	0.006	0.002	0.01269
510422.67	4276746.9	0.005	0.007	0.002	0.01406
510452.36	4276669.61	0.006	0.007	0.003	0.01560
510518.97	4276678.76	0.007	0.009	0.003	0.01811
510563.21	4276656.9	0.007	0.009	0.003	0.01964
510600.33	4276627.41	0.007	0.010	0.004	0.02077
510571.86	4276593.85	0.007	0.009	0.003	0.01903
510522.02	4276624.36	0.006	0.008	0.003	0.01769
510525.92	4276534.3	0.006	0.008	0.003	0.01661
510468.25	4276503.81	0.005	0.007	0.002	0.01478
510476.7	4276581.69	0.006	0.007	0.003	0.01585
510425.26	4276527.32	0.005	0.007	0.002	0.01412
510398.44	4276557.45	0.005	0.006	0.002	0.01372
510371.12	4276602	0.005	0.006	0.002	0.01309
510328.51	4276635.8	0.004	0.006	0.002	0.01173
510339.9	4276656.37	0.004	0.006	0.002	0.01192
510329.33	4276697.73	0.004	0.005	0.002	0.01124
511060.04	4278365.13	0.048	0.063	0.022	0.13297
511053.55	4278281.17	0.057	0.075	0.027	0.15892
511449.69	4278012.31	0.103	0.137	0.049	0.28869
511463.6	4278021.57	0.095	0.126	0.045	0.26590
511584.5	4278030.79	0.060	0.078	0.028	0.16613
511579.17	4278016.57	0.063	0.082	0.030	0.17481
511643.38	4278010.53	0.051	0.067	0.024	0.14319
511658.54	4277976.09	0.052	0.068	0.025	0.14483
511473.56	4278066.24	0.080	0.106	0.038	0.22392
510844.05	4276334.61	0.011	0.014	0.005	0.02968
510819	4276360.66	0.010	0.014	0.005	0.02894
510812.25	4276338.82	0.010	0.013	0.005	0.02790
510766.27	4276358.28	0.009	0.012	0.004	0.02577
510788.08	4276480.9	0.011	0.014	0.005	0.03042
510862.95	4276608.23	0.015	0.021	0.007	0.04393
510849.39	4276591.14	0.015	0.020	0.007	0.04135
510838.19	4276539.85	0.013	0.018	0.006	0.03750

North Entry Area Plan Project

Unmitigated

Cancer Risk Impacts from Construction at the Maximum Impacted Sensitive Receptor - Adult

Cancer Potency Factor: 1.1 (mg/kg-day)⁻¹
Exposure Frequency 350 days/year
Averaging Period 25550 days

	DPM Concentration	Age Sensitivity	Daily Breathing Rate	Time At Home	Exposure Duration	Unit Risk Factor
Construction						
Year	(ug/m3)	Factor	(L/kg-day)	Factor	(years)	(ug/m3) ⁻¹
2019	1	1	261	0.73	0.5	1.4
2020	1	1	261	0.73	1	2.9
2021	1	1	261	0.73	0.5	1.4

BAAQMD 2016. Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines.

North Entry Area Plan Project

No Mitigation at Sensitive Receptors

Estimated Cancer Risks from Construction DPM - Adult Receptors

X (m)	Y (m)	Adult Cancer Risk 2019 (/million)	Adult Cancer Risk 2020 (/million)	Adult Cancer Risk 2021 (/million)	Total Cancer Risk (/million)	Maximum Cancer Risk
511141.17	4277077.82	0.037	0.048	0.017	0.10172	0.10
511177.3	4277063.56	0.035	0.045	0.016	0.09625	BAAQMD threshold of significance
511115.23	4277044.7	0.026	0.035	0.012	0.07368	10
511127.93	4277027.53	0.025	0.032	0.012	0.06881	Exceed thresholds?
511112.48	4276990.1	0.018	0.024	0.009	0.05151	No
511152.66	4277006.58	0.024	0.031	0.011	0.06570	
511185.29	4276993.19	0.024	0.031	0.011	0.06557	
511245.73	4277021.01	0.027	0.036	0.013	0.07571	
511278.7	4277033.03	0.028	0.036	0.013	0.07668	
511308.58	4277036.12	0.027	0.035	0.013	0.07417	
511319.91	4277044.7	0.027	0.035	0.013	0.07493	
511336.05	4277053.98	0.027	0.035	0.013	0.07495	
511350.3	4277017.64	0.023	0.031	0.011	0.06515	
511371.36	4277040.35	0.024	0.031	0.011	0.06687	
511359.18	4277004.82	0.022	0.029	0.010	0.06183	
511380.24	4277027.53	0.023	0.030	0.011	0.06330	
511370.17	4276993.1	0.021	0.028	0.010	0.05872	
511391.78	4277015.07	0.022	0.028	0.010	0.05976	
511417.05	4277042.36	0.022	0.028	0.010	0.06045	
511377.68	4276982.47	0.020	0.026	0.010	0.05632	
511400.94	4277005	0.021	0.027	0.010	0.05712	
511412.84	4276995.66	0.020	0.026	0.009	0.05444	
511437.57	4277020.75	0.020	0.026	0.009	0.05455	
511426.67	4277032.47	0.021	0.027	0.010	0.05760	
511447.91	4277011.04	0.019	0.024	0.009	0.05205	
511458.35	4276998.96	0.018	0.023	0.008	0.04946	
511467.33	4276989.25	0.017	0.022	0.008	0.04747	
511477.22	4276977.16	0.016	0.021	0.008	0.04527	
511488.57	4276969.65	0.016	0.020	0.007	0.04344	
511498.09	4276955.18	0.015	0.019	0.007	0.04136	
511388.39	4276972.03	0.019	0.025	0.009	0.05380	
511399.38	4276962.14	0.019	0.024	0.009	0.05147	

511400.53	4278315.27	0.008	0.011	0.004	0.02253
511340.62	4278311.18	0.009	0.012	0.004	0.02552
511345.14	4278296.52	0.009	0.013	0.004	0.02619
511364.54	4278312.47	0.009	0.012	0.004	0.02431
511209.12	4276947.27	0.020	0.026	0.009	0.05504
511176.13	4276927.62	0.017	0.022	0.008	0.04695
511219.65	4276925.86	0.018	0.024	0.009	0.05120
511196.49	4276892.17	0.015	0.020	0.007	0.04275
511003.4	4276731.86	0.004	0.007	0.002	0.01365
510998.1	4276717.84	0.004	0.007	0.002	0.01315
511028.47	4276724.85	0.005	0.007	0.002	0.01396
511051.99	4276724.69	0.005	0.007	0.003	0.01489
511131.57	4276736.84	0.007	0.010	0.003	0.02043
511001.84	4276671.43	0.004	0.006	0.002	0.01176
511001.84	4276650.09	0.004	0.006	0.002	0.01121
511020.22	4276632.96	0.004	0.005	0.002	0.01110
511038.75	4276665.82	0.004	0.006	0.002	0.01253
511039.53	4276636.23	0.004	0.006	0.002	0.01177
511082.2	4276682.64	0.005	0.007	0.003	0.01490
511107.74	4276673.92	0.006	0.008	0.003	0.01594
511082.67	4276634.05	0.005	0.006	0.002	0.01343
511110.54	4276628.29	0.005	0.007	0.002	0.01447
511127.99	4276630.94	0.005	0.007	0.003	0.01536
511125.03	4276675.95	0.006	0.008	0.003	0.01701
511144.81	4276679.06	0.007	0.009	0.003	0.01831
511150.72	4276637.95	0.006	0.008	0.003	0.01671
511169.1	4276687.47	0.007	0.010	0.003	0.02017
511171.75	4276641.37	0.006	0.008	0.003	0.01785
510972.24	4276568.62	0.003	0.005	0.002	0.00938
510970.09	4276558.27	0.003	0.005	0.002	0.00919
510968.79	4276547.92	0.003	0.005	0.002	0.00902
510965.99	4276537.57	0.003	0.005	0.002	0.00887
510988.84	4276570.99	0.003	0.005	0.002	0.00938
510985.39	4276561.72	0.003	0.005	0.002	0.00920
511025.27	4276572.93	0.003	0.005	0.002	0.00994
511039.72	4276569.26	0.004	0.005	0.002	0.01027
511021.39	4276549	0.003	0.005	0.002	0.00942
511014.5	4276530.03	0.003	0.004	0.002	0.00898
511041.66	4276545.12	0.003	0.005	0.002	0.00986
511034.33	4276536.5	0.003	0.005	0.002	0.00951
510959.53	4276510.2	0.003	0.004	0.001	0.00854

510971.81	4276510.84	0.003	0.004	0.001	0.00839
510964.91	4276497.69	0.003	0.004	0.001	0.00827
510962.11	4276476.57	0.002	0.004	0.001	0.00803
510962.54	4276462.34	0.002	0.004	0.001	0.00785
511001.78	4276503.3	0.003	0.004	0.001	0.00841
510995.74	4276530.46	0.003	0.004	0.001	0.00875
511026.57	4276504.16	0.003	0.004	0.001	0.00879
511041.44	4276504.59	0.003	0.004	0.002	0.00915
511034.33	4276471.61	0.003	0.004	0.001	0.00847
511029.15	4276461.26	0.003	0.004	0.001	0.00822
511013.2	4276427.63	0.003	0.004	0.001	0.00758
511012.5	4276387.62	0.002	0.003	0.001	0.00713
511077.94	4276401.42	0.003	0.004	0.001	0.00850
511037.26	4276343.4	0.002	0.003	0.001	0.00698
511102.71	4276389.03	0.003	0.004	0.001	0.00883
511104.83	4276341.98	0.003	0.004	0.001	0.00815
511099.17	4276325	0.003	0.004	0.001	0.00779
511149.05	4276347.29	0.003	0.004	0.002	0.00901
511175.94	4276353.3	0.003	0.005	0.002	0.00960
511200.71	4276325.35	0.003	0.005	0.002	0.00956
511144.81	4276305.9	0.003	0.004	0.001	0.00830
511132.43	4276291.39	0.003	0.004	0.001	0.00788
511089.62	4276270.16	0.002	0.003	0.001	0.00687
511056.01	4276256.72	0.002	0.003	0.001	0.00629
511114.38	4276223.11	0.002	0.003	0.001	0.00672
511056.01	4276193.39	0.002	0.003	0.001	0.00573
511065.21	4276110.96	0.002	0.002	0.001	0.00523
511120.4	4276103.53	0.002	0.003	0.001	0.00570
511146.58	4276086.91	0.002	0.003	0.001	0.00582
511054.6	4276057.54	0.002	0.002	0.001	0.00481
511079.71	4276059.31	0.002	0.002	0.001	0.00503
511063.79	4276032.07	0.002	0.002	0.001	0.00474
511091.03	4276029.59	0.002	0.002	0.001	0.00495
511112.26	4276047.99	0.002	0.002	0.001	0.00524
511148.35	4276034.55	0.002	0.003	0.001	0.00546
511187.26	4276047.99	0.002	0.003	0.001	0.00591
511099.18	4276852.79	0.009	0.012	0.004	0.02586
511091.4	4276809.98	0.008	0.010	0.004	0.02160
511126.42	4276783.8	0.008	0.011	0.004	0.02300
511155.44	4276841.83	0.011	0.015	0.005	0.03134
511197.19	4276843.95	0.013	0.017	0.006	0.03567

511240	4276846.07	0.014	0.018	0.007	0.03884
511290.59	4276850.67	0.015	0.019	0.007	0.04084
511322.08	4276852.44	0.015	0.019	0.007	0.04118
511271.92	4276788.58	0.012	0.016	0.006	0.03311
511269.62	4276751.13	0.011	0.014	0.005	0.02945
511286.9	4276724.63	0.010	0.013	0.005	0.02782
511322.05	4276714.26	0.010	0.013	0.005	0.02785
511347.4	4276753.44	0.011	0.015	0.005	0.03121
511324.93	4276787.43	0.012	0.016	0.006	0.03407
511395.79	4276750.56	0.011	0.015	0.005	0.03084
511433.82	4276788.58	0.012	0.015	0.006	0.03295
511474.15	4276802.99	0.012	0.015	0.006	0.03254
511455.71	4276828.34	0.013	0.016	0.006	0.03504
511396.49	4276844.26	0.014	0.018	0.007	0.03870
511369.02	4276870.9	0.015	0.020	0.007	0.04243
511333.22	4276911.69	0.018	0.023	0.008	0.04892
511305.33	4276950.31	0.020	0.026	0.010	0.05632
511416.46	4276868.95	0.014	0.019	0.007	0.04020
511406.83	4276881.28	0.015	0.020	0.007	0.04187
511400.52	4276896.01	0.016	0.021	0.007	0.04372
511389.39	4276913.76	0.017	0.022	0.008	0.04635
511368.34	4276928.8	0.018	0.023	0.008	0.04955
511356.31	4276946.84	0.019	0.025	0.009	0.05282
511350.29	4276960.98	0.020	0.026	0.009	0.05539
511337.96	4276975.41	0.021	0.028	0.010	0.05870
511320.22	4276989.55	0.023	0.029	0.011	0.06270
511421.25	4276982.31	0.019	0.024	0.009	0.05181
511435.82	4276972.74	0.018	0.023	0.008	0.04918
511407.51	4276951.92	0.018	0.023	0.008	0.04949
511416.67	4276936.52	0.017	0.022	0.008	0.04697
511441.65	4276961.5	0.017	0.022	0.008	0.04740
511428.75	4276926.11	0.016	0.021	0.008	0.04492
511451.64	4276947.34	0.016	0.021	0.008	0.04506
511435.82	4276912.79	0.016	0.020	0.007	0.04308
511462.88	4276936.52	0.016	0.020	0.007	0.04308
510943.27	4276699.02	0.003	0.005	0.002	0.01031
510940.61	4276686.09	0.003	0.005	0.002	0.01004
510936.99	4276669.16	0.003	0.005	0.002	0.00968
510931.47	4276639.48	0.003	0.005	0.002	0.00915
510924.06	4276619.89	0.003	0.004	0.001	0.00863
510637	4276777.21	0.001	0.002	0.001	0.00388

510548.73	4276774.18	0.001	0.001	0.001	0.00306
510547.21	4276898.28	0.001	0.001	0.000	0.00271
510551.25	4276958.3	0.001	0.001	0.000	0.00248
510650.62	4277053.14	0.001	0.002	0.001	0.00331
510672.82	4277035.48	0.001	0.002	0.001	0.00378
510685.93	4277000.17	0.002	0.002	0.001	0.00424
510709.64	4277123.25	0.001	0.002	0.001	0.00398
510551.75	4277065.75	0.001	0.001	0.000	0.00215
510585.55	4277002.69	0.001	0.001	0.000	0.00263
510681.05	4277526.3	0.002	0.003	0.001	0.00597
510602.09	4277543.05	0.001	0.002	0.001	0.00393
510585.34	4277602.27	0.002	0.002	0.001	0.00423
510520.14	4277627.4	0.001	0.002	0.001	0.00343
510477.07	4277653.12	0.001	0.001	0.001	0.00318
510525.39	4277547.1	0.001	0.001	0.000	0.00283
510511.13	4277494.37	0.001	0.001	0.000	0.00238
510485.63	4277496.53	0.001	0.001	0.000	0.00222
510439.39	4277515.55	0.001	0.001	0.000	0.00208
510369.82	4277592.96	0.001	0.001	0.000	0.00223
510394.07	4277635.94	0.001	0.001	0.000	0.00252
510368.35	4277565.04	0.001	0.001	0.000	0.00210
510301.12	4277596.64	0.001	0.001	0.000	0.00190
510299.29	4277636.31	0.001	0.001	0.000	0.00197
510267.33	4277553.29	0.001	0.001	0.000	0.00168
510193.12	4277549.61	0.001	0.001	0.000	0.00146
510147.56	4277487.9	0.000	0.001	0.000	0.00133
510241.24	4277332.5	0.000	0.001	0.000	0.00128
510316.19	4277344.99	0.001	0.001	0.000	0.00149
510275.41	4277252.05	0.000	0.001	0.000	0.00123
510322.06	4277228.54	0.000	0.001	0.000	0.00129
510168.14	4277155.06	0.000	0.000	0.000	0.00098
510109.73	4277094.81	0.000	0.000	0.000	0.00082
510170.34	4277081.59	0.000	0.000	0.000	0.00090
510264.36	4276914.24	0.000	0.001	0.000	0.00116
510199.1	4276903.44	0.000	0.000	0.000	0.00100
510157.61	4276829.53	0.000	0.000	0.000	0.00096
510201.26	4276808.79	0.000	0.001	0.000	0.00109
510259.18	4276827.37	0.000	0.001	0.000	0.00125
510308.02	4276868.86	0.000	0.001	0.000	0.00137
510330.92	4276810.08	0.001	0.001	0.000	0.00156
510353.4	4276998.95	0.000	0.001	0.000	0.00136

510358.58	4276903.01	0.001	0.001	0.000	0.00153
510463.34	4276900.64	0.001	0.001	0.000	0.00212
510416.09	4276851.59	0.001	0.001	0.000	0.00193
510411.3	4276825.86	0.001	0.001	0.000	0.00196
510422.67	4276746.9	0.001	0.001	0.000	0.00217
510452.36	4276669.61	0.001	0.001	0.000	0.00240
510518.97	4276678.76	0.001	0.001	0.000	0.00279
510563.21	4276656.9	0.001	0.001	0.001	0.00303
510600.33	4276627.41	0.001	0.002	0.001	0.00320
510571.86	4276593.85	0.001	0.001	0.000	0.00293
510522.02	4276624.36	0.001	0.001	0.000	0.00273
510525.92	4276534.3	0.001	0.001	0.000	0.00256
510468.25	4276503.81	0.001	0.001	0.000	0.00228
510476.7	4276581.69	0.001	0.001	0.000	0.00244
510425.26	4276527.32	0.001	0.001	0.000	0.00218
510398.44	4276557.45	0.001	0.001	0.000	0.00212
510371.12	4276602	0.001	0.001	0.000	0.00202
510328.51	4276635.8	0.001	0.001	0.000	0.00181
510339.9	4276656.37	0.001	0.001	0.000	0.00184
510329.33	4276697.73	0.001	0.001	0.000	0.00173
511060.04	4278365.13	0.007	0.010	0.003	0.02051
511053.55	4278281.17	0.009	0.012	0.004	0.02451
511449.69	4278012.31	0.016	0.021	0.008	0.04452
511463.6	4278021.57	0.015	0.019	0.007	0.04101
511584.5	4278030.79	0.009	0.012	0.004	0.02562
511579.17	4278016.57	0.010	0.013	0.005	0.02696
511643.38	4278010.53	0.008	0.010	0.004	0.02208
511658.54	4277976.09	0.008	0.011	0.004	0.02233
511473.56	4278066.24	0.012	0.016	0.006	0.03453
510844.05	4276334.61	0.002	0.002	0.001	0.00458
510819	4276360.66	0.002	0.002	0.001	0.00446
510812.25	4276338.82	0.002	0.002	0.001	0.00430
510766.27	4276358.28	0.001	0.002	0.001	0.00397
510788.08	4276480.9	0.002	0.002	0.001	0.00469
510862.95	4276608.23	0.002	0.003	0.001	0.00677
510849.39	4276591.14	0.002	0.003	0.001	0.00638
510838.19	4276539.85	0.002	0.003	0.001	0.00578

North Entry Area Plan Project

Unmitigated
at Sensitive Receptors

Chronic Non-Cancer Hazard Index

Reference Exposure Level (REL) for DPM: 5 ug/m3

CNCHI = DPM/REL

X (m)	Y (m)	2019 DPM (ug/m3)	2020 DPM (ug/m3)	2021 DPM (ug/m3)	Max DPM (ug/m3)	CNCHI	Maximum 0.01 BAAQMD threshold of significance 1 Exceed thresholds? No
511141.17	4277077.82	0.02547	0.016702	0.011988	0.02547	0.00509	
511177.3	4277063.56	0.024138	0.015785	0.011343	0.024138	0.00483	
511115.23	4277044.7	0.018394	0.012124	0.008684	0.018394	0.00368	
511127.93	4277027.53	0.017201	0.011311	0.008109	0.017201	0.00344	
511112.48	4276990.1	0.012845	0.008484	0.006072	0.012845	0.00257	
511152.66	4277006.58	0.016453	0.010787	0.007743	0.016453	0.00329	
511185.29	4276993.19	0.016439	0.010754	0.007727	0.016439	0.00329	
511245.73	4277021.01	0.019004	0.012408	0.008922	0.019004	0.00380	
511278.7	4277033.03	0.019254	0.012565	0.009036	0.019254	0.00385	
511308.58	4277036.12	0.018626	0.012152	0.00874	0.018626	0.00373	
511319.91	4277044.7	0.018817	0.012276	0.00883	0.018817	0.00376	
511336.05	4277053.98	0.018823	0.012278	0.008832	0.018823	0.00376	
511350.3	4277017.64	0.016361	0.010673	0.007677	0.016361	0.00327	
511371.36	4277040.35	0.016795	0.010955	0.00788	0.016795	0.00336	
511359.18	4277004.82	0.015527	0.010129	0.007285	0.015527	0.00311	
511380.24	4277027.53	0.015899	0.01037	0.007459	0.015899	0.00318	
511370.17	4276993.1	0.014747	0.009619	0.006919	0.014747	0.00295	
511391.78	4277015.07	0.015008	0.009789	0.007041	0.015008	0.00300	
511417.05	4277042.36	0.015181	0.009902	0.007123	0.015181	0.00304	
511377.68	4276982.47	0.014145	0.009227	0.006637	0.014145	0.00283	
511400.94	4277005	0.014346	0.009357	0.006731	0.014346	0.00287	
511412.84	4276995.66	0.013672	0.008918	0.006415	0.013672	0.00273	
511437.57	4277020.75	0.013699	0.008935	0.006427	0.013699	0.00274	
511426.67	4277032.47	0.014466	0.009436	0.006787	0.014466	0.00289	
511447.91	4277011.04	0.013073	0.008527	0.006134	0.013073	0.00261	
511458.35	4276998.96	0.012422	0.008103	0.005828	0.012422	0.00248	
511467.33	4276989.25	0.011921	0.007776	0.005593	0.011921	0.00238	
511477.22	4276977.16	0.011369	0.007416	0.005334	0.011369	0.00227	
511488.57	4276969.65	0.010911	0.007117	0.005119	0.010911	0.00218	
511498.09	4276955.18	0.010387	0.006775	0.004874	0.010387	0.00208	

511388.39	4276972.03	0.013512	0.008814	0.00634	0.013512	0.00270
511399.38	4276962.14	0.012926	0.008432	0.006065	0.012926	0.00259
511400.53	4278315.27	0.005577	0.00373	0.002656	0.005577	0.00112
511340.62	4278311.18	0.006187	0.00429	0.003011	0.006187	0.00124
511345.14	4278296.52	0.006361	0.004397	0.003091	0.006361	0.00127
511364.54	4278312.47	0.005967	0.00405	0.002867	0.005967	0.00119
511209.12	4276947.27	0.013805	0.009026	0.006486	0.013805	0.00276
511176.13	4276927.62	0.011761	0.007706	0.005533	0.011761	0.00235
511219.65	4276925.86	0.012844	0.008396	0.006034	0.012844	0.00257
511196.49	4276892.17	0.010715	0.007015	0.005038	0.010715	0.00214
511003.4	4276731.86	0.003098	0.002397	0.001614	0.003098	0.00062
510998.1	4276717.84	0.002949	0.002326	0.001556	0.002949	0.00059
511028.47	4276724.85	0.003334	0.00237	0.001648	0.003334	0.00067
511051.99	4276724.69	0.003629	0.002495	0.001757	0.003629	0.00073
511131.57	4276736.84	0.00509	0.003366	0.002408	0.00509	0.00102
511001.84	4276671.43	0.00271	0.002047	0.001391	0.00271	0.00054
511001.84	4276650.09	0.002597	0.001944	0.001325	0.002597	0.00052
511020.22	4276632.96	0.00265	0.001887	0.001311	0.00265	0.00053
511038.75	4276665.82	0.003032	0.002108	0.001478	0.003032	0.00061
511039.53	4276636.23	0.002855	0.001979	0.001389	0.002855	0.00057
511082.2	4276682.64	0.003677	0.002471	0.001756	0.003677	0.00074
511107.74	4276673.92	0.003958	0.002634	0.001879	0.003958	0.00079
511082.67	4276634.05	0.003317	0.002227	0.001583	0.003317	0.00066
511110.54	4276628.29	0.003595	0.00239	0.001706	0.003595	0.00072
511127.99	4276630.94	0.003825	0.002533	0.001811	0.003825	0.00077
511125.03	4276675.95	0.004234	0.002804	0.002005	0.004234	0.00085
511144.81	4276679.06	0.004567	0.003014	0.002158	0.004567	0.00091
511150.72	4276637.95	0.004171	0.002751	0.00197	0.004171	0.00083
511169.1	4276687.47	0.005043	0.003316	0.002378	0.005043	0.00101
511171.75	4276641.37	0.004462	0.002935	0.002104	0.004462	0.00089
510972.24	4276568.62	0.002051	0.001685	0.001111	0.002051	0.00041
510970.09	4276558.27	0.002004	0.001654	0.001088	0.002004	0.00040
510968.79	4276547.92	0.001964	0.001625	0.001068	0.001964	0.00039
510965.99	4276537.57	0.001919	0.001606	0.001051	0.001919	0.00038
510988.84	4276570.99	0.002154	0.001637	0.00111	0.002154	0.00043
510985.39	4276561.72	0.002099	0.00161	0.001088	0.002099	0.00042
511025.27	4276572.93	0.002392	0.00168	0.001173	0.002392	0.00048
511039.72	4276569.26	0.002496	0.001724	0.001212	0.002496	0.00050
511021.39	4276549	0.002262	0.001594	0.001112	0.002262	0.00045
511014.5	4276530.03	0.002148	0.001525	0.001061	0.002148	0.00043
511041.66	4276545.12	0.0024	0.001653	0.001163	0.0024	0.00048

511034.33	4276536.5	0.002305	0.001599	0.001122	0.002305	0.00046
510959.53	4276510.2	0.001813	0.001561	0.001012	0.001813	0.00036
510971.81	4276510.84	0.001869	0.001492	0.000993	0.001869	0.00037
510964.91	4276497.69	0.001802	0.001489	0.000979	0.001802	0.00036
510962.11	4276476.57	0.001736	0.001452	0.000951	0.001736	0.00035
510962.54	4276462.34	0.001703	0.001417	0.000929	0.001703	0.00034
511001.78	4276503.3	0.001988	0.001439	0.000993	0.001988	0.00040
510995.74	4276530.46	0.002047	0.001508	0.001034	0.002047	0.00041
511026.57	4276504.16	0.002121	0.001482	0.001037	0.002121	0.00042
511041.44	4276504.59	0.002228	0.001533	0.001079	0.002228	0.00045
511034.33	4276471.61	0.002057	0.001423	0.001	0.002057	0.00041
511029.15	4276461.26	0.00199	0.001384	0.00097	0.00199	0.00040
511013.2	4276427.63	0.001817	0.001284	0.000895	0.001817	0.00036
511012.5	4276387.62	0.001713	0.001207	0.000842	0.001713	0.00034
511077.94	4276401.42	0.002103	0.001409	0.001002	0.002103	0.00042
511037.26	4276343.4	0.001706	0.001166	0.000823	0.001706	0.00034
511102.71	4276389.03	0.002193	0.001458	0.001041	0.002193	0.00044
511104.83	4276341.98	0.002024	0.001345	0.00096	0.002024	0.00040
511099.17	4276325	0.001933	0.001287	0.000918	0.001933	0.00039
511149.05	4276347.29	0.002246	0.001483	0.001062	0.002246	0.00045
511175.94	4276353.3	0.002396	0.001579	0.001131	0.002396	0.00048
511200.71	4276325.35	0.00239	0.001573	0.001127	0.00239	0.00048
511144.81	4276305.9	0.00207	0.001368	0.000979	0.00207	0.00041
511132.43	4276291.39	0.001962	0.001299	0.000929	0.001962	0.00039
511089.62	4276270.16	0.001701	0.001136	0.00081	0.001701	0.00034
511056.01	4276256.72	0.001549	0.001044	0.000741	0.001549	0.00031
511114.38	4276223.11	0.001671	0.00111	0.000793	0.001671	0.00033
511056.01	4276193.39	0.001416	0.00095	0.000676	0.001416	0.00028
511065.21	4276110.96	0.001298	0.000864	0.000616	0.001298	0.00026
511120.4	4276103.53	0.001418	0.00094	0.000672	0.001418	0.00028
511146.58	4276086.91	0.00145	0.000958	0.000686	0.00145	0.00029
511054.6	4276057.54	0.001196	0.000794	0.000567	0.001196	0.00024
511079.71	4276059.31	0.001252	0.00083	0.000593	0.001252	0.00025
511063.79	4276032.07	0.00118	0.000782	0.000559	0.00118	0.00024
511091.03	4276029.59	0.001233	0.000816	0.000584	0.001233	0.00025
511112.26	4276047.99	0.001306	0.000864	0.000618	0.001306	0.00026
511148.35	4276034.55	0.001363	0.0009	0.000644	0.001363	0.00027
511187.26	4276047.99	0.001475	0.000972	0.000696	0.001475	0.00029
511099.18	4276852.79	0.006416	0.004275	0.003049	0.006416	0.00128
511091.4	4276809.98	0.005346	0.003578	0.002547	0.005346	0.00107
511126.42	4276783.8	0.005728	0.00379	0.002711	0.005728	0.00115

511155.44	4276841.83	0.007835	0.005152	0.003694	0.007835	0.00157
511197.19	4276843.95	0.008936	0.005853	0.004203	0.008936	0.00179
511240	4276846.07	0.009742	0.006369	0.004577	0.009742	0.00195
511290.59	4276850.67	0.010251	0.006694	0.004813	0.010251	0.00205
511322.08	4276852.44	0.010337	0.006748	0.004852	0.010337	0.00207
511271.92	4276788.58	0.008307	0.005429	0.003902	0.008307	0.00166
511269.62	4276751.13	0.007387	0.00483	0.003471	0.007387	0.00148
511286.9	4276724.63	0.006977	0.004561	0.003278	0.006977	0.00140
511322.05	4276714.26	0.006989	0.004566	0.003282	0.006989	0.00140
511347.4	4276753.44	0.007834	0.005115	0.003678	0.007834	0.00157
511324.93	4276787.43	0.008553	0.005585	0.004015	0.008553	0.00171
511395.79	4276750.56	0.007744	0.005054	0.003634	0.007744	0.00155
511433.82	4276788.58	0.008273	0.005398	0.003882	0.008273	0.00165
511474.15	4276802.99	0.008173	0.005332	0.003835	0.008173	0.00163
511455.71	4276828.34	0.008799	0.00574	0.004129	0.008799	0.00176
511396.49	4276844.26	0.009718	0.006341	0.004561	0.009718	0.00194
511369.02	4276870.9	0.010654	0.006952	0.005	0.010654	0.00213
511333.22	4276911.69	0.012284	0.008016	0.005765	0.012284	0.00246
511305.33	4276950.31	0.01414	0.009228	0.006636	0.01414	0.00283
511416.46	4276868.95	0.010095	0.006585	0.004737	0.010095	0.00202
511406.83	4276881.28	0.010514	0.006859	0.004934	0.010514	0.00210
511400.52	4276896.01	0.010979	0.007162	0.005152	0.010979	0.00220
511389.39	4276913.76	0.01164	0.007594	0.005462	0.01164	0.00233
511368.34	4276928.8	0.012442	0.008117	0.005838	0.012442	0.00249
511356.31	4276946.84	0.013265	0.008654	0.006225	0.013265	0.00265
511350.29	4276960.98	0.013909	0.009074	0.006526	0.013909	0.00278
511337.96	4276975.41	0.01474	0.009616	0.006917	0.01474	0.00295
511320.22	4276989.55	0.015746	0.010273	0.007389	0.015746	0.00315
511421.25	4276982.31	0.013013	0.008488	0.006106	0.013013	0.00260
511435.82	4276972.74	0.012352	0.008057	0.005795	0.012352	0.00247
511407.51	4276951.92	0.012429	0.008107	0.005832	0.012429	0.00249
511416.67	4276936.52	0.011796	0.007695	0.005535	0.011796	0.00236
511441.65	4276961.5	0.011905	0.007765	0.005586	0.011905	0.00238
511428.75	4276926.11	0.011282	0.007359	0.005294	0.011282	0.00226
511451.64	4276947.34	0.011317	0.007382	0.00531	0.011317	0.00226
511435.82	4276912.79	0.01082	0.007058	0.005077	0.01082	0.00216
511462.88	4276936.52	0.010819	0.007057	0.005076	0.010819	0.00216
510943.27	4276699.02	0.002365	0.0018	0.001219	0.002365	0.00047
510940.61	4276686.09	0.002296	0.001754	0.001187	0.002296	0.00046
510936.99	4276669.16	0.00221	0.001695	0.001145	0.00221	0.00044
510931.47	4276639.48	0.002072	0.001609	0.001082	0.002072	0.00041

510924.06	4276619.89	0.001965	0.001512	0.00102	0.001965	0.00039
510637	4276777.21	0.000971	0.000639	0.000458	0.000971	0.00019
510548.73	4276774.18	0.000765	0.000502	0.00036	0.000765	0.00015
510547.21	4276898.28	0.000678	0.000446	0.00032	0.000678	0.00014
510551.25	4276958.3	0.000618	0.000407	0.000292	0.000618	0.00012
510650.62	4277053.14	0.000825	0.000544	0.00039	0.000825	0.00017
510672.82	4277035.48	0.000943	0.000621	0.000445	0.000943	0.00019
510685.93	4277000.17	0.001058	0.000698	0.0005	0.001058	0.00021
510709.64	4277123.25	0.000994	0.000656	0.000469	0.000994	0.00020
510551.75	4277065.75	0.000536	0.000353	0.000253	0.000536	0.00011
510585.55	4277002.69	0.000656	0.000432	0.00031	0.000656	0.00013
510681.05	4277526.3	0.001496	0.00098	0.000704	0.001496	0.00030
510602.09	4277543.05	0.000985	0.000646	0.000464	0.000985	0.00020
510585.34	4277602.27	0.00106	0.000694	0.000499	0.00106	0.00021
510520.14	4277627.4	0.00086	0.000563	0.000404	0.00086	0.00017
510477.07	4277653.12	0.000796	0.000522	0.000375	0.000796	0.00016
510525.39	4277547.1	0.000709	0.000465	0.000334	0.000709	0.00014
510511.13	4277494.37	0.000596	0.000392	0.000281	0.000596	0.00012
510485.63	4277496.53	0.000556	0.000365	0.000262	0.000556	0.00011
510439.39	4277515.55	0.00052	0.000342	0.000245	0.00052	0.00010
510369.82	4277592.96	0.000557	0.000365	0.000262	0.000557	0.00011
510394.07	4277635.94	0.000631	0.000414	0.000297	0.000631	0.00013
510368.35	4277565.04	0.000527	0.000346	0.000248	0.000527	0.00011
510301.12	4277596.64	0.000475	0.000312	0.000224	0.000475	0.00009
510299.29	4277636.31	0.000492	0.000323	0.000232	0.000492	0.00010
510267.33	4277553.29	0.000422	0.000277	0.000199	0.000422	0.00008
510193.12	4277549.61	0.000365	0.00024	0.000172	0.000365	0.00007
510147.56	4277487.9	0.000334	0.000219	0.000157	0.000334	0.00007
510241.24	4277332.5	0.000319	0.00021	0.00015	0.000319	0.00006
510316.19	4277344.99	0.000371	0.000244	0.000175	0.000371	0.00007
510275.41	4277252.05	0.000306	0.000201	0.000144	0.000306	0.00006
510322.06	4277228.54	0.000322	0.000212	0.000152	0.000322	0.00006
510168.14	4277155.06	0.000245	0.000161	0.000115	0.000245	0.00005
510109.73	4277094.81	0.000205	0.000135	9.69E-05	0.000205	0.00004
510170.34	4277081.59	0.000226	0.000149	0.000107	0.000226	0.00005
510264.36	4276914.24	0.000291	0.000191	0.000137	0.000291	0.00006
510199.1	4276903.44	0.00025	0.000164	0.000118	0.00025	0.00005
510157.61	4276829.53	0.000241	0.000159	0.000114	0.000241	0.00005
510201.26	4276808.79	0.000273	0.000179	0.000129	0.000273	0.00005
510259.18	4276827.37	0.000312	0.000205	0.000147	0.000312	0.00006
510308.02	4276868.86	0.000342	0.000225	0.000161	0.000342	0.00007

510330.92	4276810.08	0.000389	0.000256	0.000183	0.000389	0.00008
510353.4	4276998.95	0.00034	0.000224	0.00016	0.00034	0.00007
510358.58	4276903.01	0.000382	0.000251	0.00018	0.000382	0.00008
510463.34	4276900.64	0.000529	0.000348	0.00025	0.000529	0.00011
510416.09	4276851.59	0.000484	0.000318	0.000228	0.000484	0.00010
510411.3	4276825.86	0.00049	0.000321	0.000231	0.00049	0.00010
510422.67	4276746.9	0.000543	0.000356	0.000255	0.000543	0.00011
510452.36	4276669.61	0.000602	0.000395	0.000283	0.000602	0.00012
510518.97	4276678.76	0.000699	0.000459	0.000329	0.000699	0.00014
510563.21	4276656.9	0.000758	0.000497	0.000357	0.000758	0.00015
510600.33	4276627.41	0.000801	0.000526	0.000377	0.000801	0.00016
510571.86	4276593.85	0.000734	0.000482	0.000346	0.000734	0.00015
510522.02	4276624.36	0.000683	0.000448	0.000322	0.000683	0.00014
510525.92	4276534.3	0.000642	0.000421	0.000302	0.000642	0.00013
510468.25	4276503.81	0.000571	0.000374	0.000269	0.000571	0.00011
510476.7	4276581.69	0.000612	0.000401	0.000288	0.000612	0.00012
510425.26	4276527.32	0.000545	0.000357	0.000257	0.000545	0.00011
510398.44	4276557.45	0.00053	0.000347	0.000249	0.00053	0.00011
510371.12	4276602	0.000506	0.000331	0.000238	0.000506	0.00010
510328.51	4276635.8	0.000453	0.000297	0.000213	0.000453	0.00009
510339.9	4276656.37	0.000461	0.000302	0.000217	0.000461	0.00009
510329.33	4276697.73	0.000434	0.000285	0.000204	0.000434	0.00009
511060.04	4278365.13	0.005142	0.003363	0.002416	0.005142	0.00103
511053.55	4278281.17	0.00615	0.004017	0.002888	0.00615	0.00123
511449.69	4278012.31	0.011065	0.00735	0.005248	0.011065	0.00221
511463.6	4278021.57	0.010208	0.006762	0.004834	0.010208	0.00204
511584.5	4278030.79	0.00641	0.004209	0.003019	0.00641	0.00128
511579.17	4278016.57	0.006745	0.004429	0.003177	0.006745	0.00135
511643.38	4278010.53	0.00553	0.003625	0.002602	0.00553	0.00111
511658.54	4277976.09	0.005595	0.003666	0.002632	0.005595	0.00112
511473.56	4278066.24	0.008603	0.005691	0.00407	0.008603	0.00172
510844.05	4276334.61	0.001129	0.00076	0.00054	0.001129	0.00023
510819	4276360.66	0.001105	0.000739	0.000526	0.001105	0.00022
510812.25	4276338.82	0.001068	0.000711	0.000507	0.001068	0.00021
510766.27	4276358.28	0.00099	0.000655	0.000468	0.00099	0.00020
510788.08	4276480.9	0.001162	0.000776	0.000553	0.001162	0.00023
510862.95	4276608.23	0.00165	0.001135	0.000799	0.00165	0.00033
510849.39	4276591.14	0.00156	0.001065	0.000752	0.00156	0.00031
510838.19	4276539.85	0.001416	0.000965	0.000682	0.001416	0.00028

North Entry Area Plan Project

Unmitigated

Construction Annual PM2.5 Total (Exhaust + Fugitive Dust)

Construction Schedule

2019

8 hours/day
5 days/week
26.4 weeks/year
1056 hours/year

132 working days starting 7/1/2019

Onsite Construction Area Source Size (m2):

143,942.0

from AERMOD

Onsite Construction PM2.5 Emissions

2019

	Onsite	Onsite	Onsite
Construction Activity	Annual PM2.5 Total	Annual PM2.5 Total	Annual PM2.5 Total
	Emissions	Emissions	Emissions
	(tons/year)	(g/sec)	(g/m2-sec)
Site Preparation	2.290E-01	5.470E-02	3.800E-07
Paving	2.500E-02	5.971E-03	4.148E-08
Total	2.540E-01	6.067E-02	4.215E-07

Offsite Construction Vehicle PM2.5 Emissions

2019

	Offsite Hauling	Offsite Vendor	Offsite Workers
Construction Activity	Annual PM2.5 Total	Annual PM2.5 Total	Annual PM2.5 Total
	Emissions	Emissions	Emissions
	(tons/year)	(tons/year)	(tons/year)
Site Preparation	0.000E+00	0.000E+00	1.420E-03
Paving	0.000E+00	0.000E+00	1.060E-03
Total (tons/year)	0.000E+00	0.000E+00	2.480E-03
Trip Distance assumed in CalEEMod (mi)	20.0	7.3	10.8
Offsite Project Trip Distance Along Roadway Segment			
North on Healdsburg Avenue to US-101 (mi)	0.90	0.90	0.90
South on Healdsburg Avenue to US-101 (mi)	0.68	0.68	0.68
Offsite Project Emissions Along Roadway Segment			
North on Healdsburg Avenue to US-101 (tons/year)	0.000E+00	0.000E+00	1.036E-04
South on Healdsburg Avenue to US-101 (tons/year)	0.000E+00	0.000E+00	7.788E-05
Total Offsite Emissions Along Segments (tons/year)	0.000E+00	0.000E+00	1.815E-04
Offsite Emissions Along Roadway Segment Analyzed			
North Road Segment Total Offsite Project PM2.5 Emissions (tons/year)	1.036E-04		
North Road Segment Total Offsite Project PM2.5 Emissions (grams/sec)	2.476E-05		
South Road Segment Total Offsite Project PM2.5 Emissions (tons/year)	7.788E-05		
South Road Segment Total Offsite Project PM2.5 Emissions (grams/sec)	1.860E-05		
Total Offsite Project PM2.5 Emissions (tons/year)	1.815E-04		
Total Offsite Project PM2.5 Emissions (grams/sec)	4.336E-05		
Onsite PM2.5 Emissions (tons/year)	2.540E-01		
Total PM2.5 Onsite Emissions (tons/year)	2.540E-01		
Onsite PM2.5 Emissions (g/m2-sec)	4.215E-07		
Total PM2.5 (tons/year)	2.542E-01		

North Entry Area Plan Project

Unmitigated

Construction Annual DPM Emissions (as PM2.5 Exhaust)

Construction Schedule

2020
8 hours/day
5 days/week
52.4 weeks/year
2096 hours/year
262 working days in 2020

Onsite Construction Area Source Size (m2): 143,942.0 from AERMOD

Onsite Construction PM2.5 Emissions

2020		Onsite	Onsite	Onsite
	Construction Activity	Annual PM2.5 Total	Annual PM2.5 Total	Annual PM2.5 Total
		Emissions	Emissions	Emissions
		(tons/year)	(g/sec)	(g/m2-sec)
	Building Construction (2020)	1.376E-01	1.656E-02	1.150E-07
	Total	1.376E-01	1.656E-02	1.150E-07

Offsite Construction Vehicle PM2.5 Emissions

2020		Offsite Hauling	Offsite Vendor	Offsite Workers
	Construction Activity	Annual PM2.5 Total	Annual PM2.5 Total	Annual PM2.5 Total
		Emissions	Emissions	Emissions
		(tons/year)	(tons/year)	(tons/year)
	Building Construction (2020)	0.000E+00	2.080E-02	8.050E-02
	Total (tons/year)	0.000E+00	2.080E-02	8.050E-02
	Trip Distance assumed in CalEEMod (mi)	20.0	7.3	10.8
	Offsite Project Trip Distance Along Roadway Segment			
	North on Healdsburg Avenue to US-101 (mi)	0.90	0.90	0.90
	South on Healdsburg Avenue to US-101 (mi)	0.68	0.68	0.68
	Offsite Project Emissions Along Roadway Segment			
	North on Healdsburg Avenue to US-101 (tons/year)	0.000E+00	1.286E-03	3.364E-03
	South on Healdsburg Avenue to US-101 (tons/year)	0.000E+00	9.663E-04	2.528E-03
	Total Offsite Emissions Along Segments (tons/year)	0.000E+00	2.252E-03	5.892E-03

Offsite Emissions Along Roadway Segment Analyzed	
North Road Segment Total Offsite Project PM2.5 Emissions (tons/year)	4.650E-03
North Road Segment Total Offsite Project PM2.5 Emissions (grams/sec)	5.596E-04
South Road Segment Total Offsite Project PM2.5 Emissions (tons/year)	3.494E-03
South Road Segment Total Offsite Project PM2.5 Emissions (grams/sec)	4.205E-04
Total Offsite Project PM2.5 Emissions (tons/year)	8.145E-03
Total Offsite Project PM2.5 Emissions (grams/sec)	9.801E-04
Onsite PM2.5 Emissions (tons/year)	1.376E-01
Total PM2.5 Onsite Emissions (tons/year)	1.376E-01
Onsite PM2.5 Emissions (g/m2-sec)	1.150E-07
Total PM2.5 (tons/year)	1.457E-01

North Entry Area Plan Project

Unmitigated

Construction Annual PM2.5 Total (Exhaust + Fugitive Dust)

Construction Schedule

2021

8 hours/day
5 days/week
52.2 weeks/year
2088 hours/year

261 working days in 2021

Onsite Construction Area Source Size (m2):

143,942.0

from AERMOD

Onsite Construction PM2.5 Emissions

2021

	Onsite	Onsite	Onsite
Construction Activity	Annual PM2.5 Total	Annual PM2.5 Total	Annual PM2.5 Total
	Emissions	Emissions	Emissions
	(tons/year)	(g/sec)	(g/m2-sec)
Building Construction (2021)	9.060E-02	1.094E-02	7.603E-08
Paving	6.240E-03	7.538E-04	5.237E-09
Architectural Coating	1.880E-03	2.271E-04	1.578E-09
Total	9.872E-02	1.192E-02	8.285E-08

Offsite Construction Vehicle PM2.5 Emissions

2021

	Offsite Hauling	Offsite Vendor	Offsite Workers
Construction Activity	Annual PM2.5 Total	Annual PM2.5 Total	Annual PM2.5 Total
	Emissions	Emissions	Emissions
	(tons/year)	(tons/year)	(tons/year)
Building Construction (2021)	0.000E+00	1.370E-02	6.170E-02
Paving	0.000E+00	0.000E+00	3.200E-04
Architectural Coating	0.000E+00	0.000E+00	2.450E-03
Total (tons/year)	0.000E+00	1.370E-02	6.447E-02

7.817E-02

Trip Distance assumed in CalEEMod (mi) 20.0 7.3 10.8

Offsite Project Trip Distance Along Roadway Segment

North on Healdsburg Avenue to US-101 (mi) 0.90 0.90 0.90
South on Healdsburg Avenue to US-101 (mi) 0.68 0.68 0.68

Offsite Project Emissions Along Roadway Segment

North on Healdsburg Avenue to US-101 (tons/year) 0.000E+00 8.471E-04 2.694E-03
South on Healdsburg Avenue to US-101 (tons/year) 0.000E+00 6.365E-04 2.025E-03
Total Offsite Emissions Along Segments (tons/year) **0.000E+00** **1.484E-03** **4.719E-03**

Offsite Emissions Along Roadway Segment Analyzed

North Road Segment Total Offsite Project PM2.5
Emissions (tons/year) 3.541E-03
North Road Segment Total Offsite Project PM2.5
Emissions (grams/sec) 4.278E-04
South Road Segment Total Offsite Project PM2.5
Emissions (tons/year) 2.661E-03
South Road Segment Total Offsite Project PM2.5
Emissions (grams/sec) 3.214E-04
Total Offsite Project PM2.5 Emissions (tons/year) **6.202E-03**
Total Offsite Project PM2.5 Emissions (grams/sec) **7.492E-04**

Onsite PM2.5 Emissions (tons/year) 9.872E-02
Total Onsite PM2.5 Emissions (tons/year) 9.872E-02
Onsite PM2.5 Emissions (g/m2-sec) 8.285E-08

Total PM2.5 (tons/year) **1.049E-01**

North Entry Area Plan Project

2019

Unmitigated at Sensitive Receptors

Construction Annual PM2.5 Total (Exhaust + Fugitive Dust)

Annual Average Onsite PM2.5 Total Emission Rate (grams/m2/sec):	4.21469E-07
Annual Average Offsite PM2.5 Total Emission Rate - North Road Segment (grams/sec):	2.47551E-05
Annual Average Offsite PM2.5 Total Emission Rate - South Road Segment (grams/sec):	1.86008E-05

X (m)	Y (m)	Onsite Annual PM2.5 Total w/Unit Emissions	Onsite Annual PM2.5 Total w/Actual Emissions	Offsite North Segment Annual PM2.5 Total w/Unit Emissions	Offsite North Segment Annual PM2.5 Total w/Actual Emissions	Offsite South Segment Annual PM2.5 Total w/Unit Emissions	Offsite South Segment Annual PM2.5 Total w/Actual Emissions	Total Annual PM2.5 Total
		(ug/m3)	(ug/m3)	(ug/m3)	(ug/m3)	(ug/m3)	(ug/m3)	(ug/m3)
511141.17	4277077.82	143983.886	0.06068	0.10570	2.61661E-06	3.61480	6.72383E-05	0.06075
511177.3	4277063.56	136457.4435	0.05751	0.12313	3.04810E-06	2.21847	4.12654E-05	0.05756
511115.23	4277044.7	103975.2279	0.04382	0.08728	2.16063E-06	4.28994	7.97964E-05	0.04390
511127.93	4277027.53	97231.93682	0.04098	0.08936	2.21212E-06	3.28742	6.11487E-05	0.04104
511112.48	4276990.1	72604.83919	0.03060	0.07821	1.93610E-06	3.46104	6.43782E-05	0.03067
511152.66	4277006.58	93009.69074	0.03920	0.09637	2.38565E-06	2.25686	4.19795E-05	0.03925
511185.29	4276993.19	92931.53969	0.03917	0.10786	2.67009E-06	1.59504	2.96691E-05	0.03920
511245.73	4277021.01	107435.162	0.04528	0.14969	3.70559E-06	1.13766	2.11614E-05	0.04531
511278.7	4277033.03	108845.3984	0.04587	0.18097	4.47993E-06	0.95695	1.78001E-05	0.04590
511308.58	4277036.12	105295.8119	0.04438	0.20876	5.16788E-06	0.79668	1.48189E-05	0.04440
511319.91	4277044.7	106378.1768	0.04484	0.22776	5.63822E-06	0.75252	1.39975E-05	0.04485
511336.05	4277053.98	106408.4588	0.04485	0.25484	6.30859E-06	0.68436	1.27297E-05	0.04487
511350.3	4277017.64	92493.80929	0.03898	0.22730	5.62683E-06	0.58893	1.09546E-05	0.03900
511371.36	4277040.35	94945.63707	0.04002	0.27084	6.70467E-06	0.52655	9.79426E-06	0.04003
511359.18	4277004.82	87778.85979	0.03700	0.22212	5.49860E-06	0.54667	1.01685E-05	0.03701
511380.24	4277027.53	89879.00693	0.03788	0.26205	6.48707E-06	0.49100	9.13300E-06	0.03790
511370.17	4276993.1	83365.94118	0.03514	0.21948	5.43325E-06	0.50372	9.36961E-06	0.03515
511391.78	4277015.07	84842.8157	0.03576	0.25569	6.32963E-06	0.45199	8.40739E-06	0.03577
511417.05	4277042.36	85822.77667	0.03617	0.30058	7.44089E-06	0.39442	7.33654E-06	0.03619
511377.68	4276982.47	79967.90391	0.03370	0.21522	5.32779E-06	0.47617	8.85715E-06	0.03372
511400.94	4277005	81099.08236	0.03418	0.25031	6.19645E-06	0.42455	7.89698E-06	0.03419
511412.84	4276995.66	77289.28017	0.03258	0.24678	6.10906E-06	0.39383	7.32556E-06	0.03259
511437.57	4277020.75	77445.41324	0.03264	0.28104	6.95717E-06	0.34754	6.46453E-06	0.03265
511426.67	4277032.47	81781.97923	0.03447	0.29152	7.21661E-06	0.37124	6.90537E-06	0.03448
511447.91	4277011.04	73902.85569	0.03115	0.27302	6.75864E-06	0.32709	6.08414E-06	0.03116
511458.35	4276998.96	70224.72977	0.02960	0.26299	6.51034E-06	0.30813	5.73147E-06	0.02961
511467.33	4276989.25	67391.86781	0.02840	0.25546	6.32394E-06	0.29293	5.44874E-06	0.02842
511477.22	4276977.16	64273.83517	0.02709	0.24638	6.09916E-06	0.27761	5.16377E-06	0.02710
511488.57	4276969.65	61680.44219	0.02600	0.24158	5.98034E-06	0.26185	4.87063E-06	0.02601
511498.09	4276955.18	58721.04041	0.02475	0.23157	5.73254E-06	0.24954	4.64165E-06	0.02476
511388.39	4276972.03	76385.135	0.03219	0.21301	5.27308E-06	0.44313	8.24258E-06	0.03221
511399.38	4276962.14	73074.91722	0.03080	0.21101	5.22357E-06	0.41336	7.68884E-06	0.03081
511400.53	4278315.27	31520.27527	0.01328	2.07337	5.13265E-05	0.06912	1.28569E-06	0.01334
511340.62	4278311.18	34958.6277	0.01473	5.39671	1.33596E-04	0.07837	1.45775E-06	0.01487
511345.14	4278296.52	35942.99635	0.01515	5.28159	1.30746E-04	0.07891	1.46779E-06	0.01528
511364.54	4278312.47	33720.90116	0.01421	3.42120	8.46922E-05	0.07473	1.39004E-06	0.01430
511209.12	4276947.27	78040.32853	0.03289	0.10628	2.63097E-06	1.17553	2.18658E-05	0.03292
511176.13	4276927.62	66485.68848	0.02802	0.09037	2.23712E-06	1.45589	2.70808E-05	0.02805
511219.65	4276925.86	72609.36368	0.03060	0.10489	2.59656E-06	1.03479	1.92479E-05	0.03062
511196.49	4276892.17	60574.16495	0.02553	0.09036	2.23687E-06	1.13906	2.11875E-05	0.02555
511003.4	4276731.86	17485.25777	0.00737	0.04183	1.03551E-06	10.36559	1.92809E-04	0.00756
510998.1	4276717.84	16641.23692	0.00701	0.04082	1.01050E-06	11.09401	2.06358E-04	0.00722
511028.47	4276724.85	18832.09233	0.00794	0.04393	1.08749E-06	5.45369	1.01443E-04	0.00804
511051.99	4276724.69	20504.85085	0.00864	0.04636	1.14765E-06	3.62046	6.73435E-05	0.00871
511131.57	4276736.84	28773.53077	0.01213	0.05827	1.44248E-06	1.43418	2.66769E-05	0.01216
511001.84	4276671.43	15298.95685	0.00645	0.03941	9.75599E-07	7.70438	1.43308E-04	0.00659
511001.84	4276650.09	14660.14888	0.00618	0.03862	9.56042E-07	6.91395	1.28605E-04	0.00631
511020.22	4276632.96	14965.76141	0.00631	0.03930	9.72876E-07	4.41557	8.21332E-05	0.00639

511038.75	4276665.82	17128.83818	0.00722	0.04241	1.04986E-06	3.65875	6.80558E-05	0.00729
511039.53	4276636.23	16131.45345	0.00680	0.04126	1.02140E-06	3.28189	6.10459E-05	0.00686
511082.2	4276682.64	20780.84991	0.00876	0.04799	1.18800E-06	2.12660	3.95565E-05	0.00880
511107.74	4276673.92	22370.66526	0.00943	0.05082	1.25805E-06	1.56697	2.91469E-05	0.00946
511082.67	4276634.05	18746.68195	0.00790	0.04586	1.13527E-06	1.84176	3.42583E-05	0.00794
511110.54	4276628.29	20320.80244	0.00856	0.04863	1.20384E-06	1.35728	2.52465E-05	0.00859
511127.99	4276630.94	21621.53405	0.00911	0.05063	1.25335E-06	1.16489	2.16679E-05	0.00914
511125.03	4276675.95	23930.36538	0.01009	0.05318	1.31648E-06	1.32193	2.45890E-05	0.01011
511144.81	4276679.06	25818.26761	0.01088	0.05587	1.38307E-06	1.10849	2.06188E-05	0.01090
511150.72	4276637.95	23579.15768	0.00994	0.05340	1.32192E-06	0.97630	1.81600E-05	0.00996
511169.1	4276687.47	28507.89733	0.01202	0.05940	1.47045E-06	0.91319	1.69861E-05	0.01203
511171.75	4276641.37	25220.86774	0.01063	0.05566	1.37787E-06	0.83989	1.56226E-05	0.01065
510972.24	4276568.62	11568.08874	0.00488	0.03388	8.38703E-07	9.54637	1.77570E-04	0.00505
510970.09	4276558.27	11298.68078	0.00476	0.03343	8.27563E-07	9.54705	1.77583E-04	0.00494
510968.79	4276547.92	11077.3509	0.00467	0.03307	8.18651E-07	9.43642	1.75525E-04	0.00485
510965.99	4276537.57	10821.04958	0.00456	0.03263	8.07759E-07	9.71816	1.80766E-04	0.00474
510988.84	4276570.99	12157.67891	0.00512	0.03494	8.64943E-07	6.39917	1.19030E-04	0.00524
510985.39	4276561.72	11847.34955	0.00499	0.03443	8.52318E-07	6.63621	1.23439E-04	0.00512
511025.27	4276572.93	13512.5005	0.00570	0.03746	9.27326E-07	3.34471	6.22144E-05	0.00576
511039.72	4276569.26	14102.822	0.00594	0.03867	9.57280E-07	2.70022	5.02263E-05	0.00600
511021.39	4276549	12778.73034	0.00539	0.03635	8.99848E-07	3.29799	6.13453E-05	0.00545
511014.5	4276530.03	12131.16781	0.00511	0.03528	8.73360E-07	3.46454	6.44433E-05	0.00518
511041.66	4276545.12	13560.36389	0.00572	0.03798	9.40199E-07	2.46950	4.59347E-05	0.00576
511034.33	4276536.5	13022.60854	0.00549	0.03703	9.16681E-07	2.67823	4.98173E-05	0.00554
510959.53	4276510.2	10217.44197	0.00431	0.03157	7.81519E-07	10.39956	1.93440E-04	0.00450
510971.81	4276510.84	10541.47934	0.00444	0.03221	7.97362E-07	7.51261	1.39741E-04	0.00458
510964.91	4276497.69	10163.24282	0.00428	0.03151	7.80033E-07	8.60838	1.60123E-04	0.00444
510962.11	4276476.57	9790.88103	0.00413	0.03084	7.63447E-07	8.77969	1.63309E-04	0.00429
510962.54	4276462.34	9600.26695	0.00405	0.03051	7.55278E-07	8.40283	1.56300E-04	0.00420
511001.78	4276503.3	11224.75587	0.00473	0.03368	8.33752E-07	3.95213	7.35129E-05	0.00481
510995.74	4276530.46	11558.75287	0.00487	0.03411	8.44397E-07	4.76764	8.86820E-05	0.00496
511026.57	4276504.16	11984.217	0.00505	0.03531	8.74103E-07	2.73723	5.09147E-05	0.00510
511041.44	4276504.59	12586.84033	0.00530	0.03659	9.05789E-07	2.24825	4.18193E-05	0.00535
511034.33	4276471.61	11620.82701	0.00490	0.03495	8.65191E-07	2.29624	4.27120E-05	0.00494
511029.15	4276461.26	11244.09167	0.00474	0.03424	8.47615E-07	2.39894	4.46223E-05	0.00478
511013.2	4276427.63	10262.13952	0.00433	0.03238	8.01570E-07	2.76506	5.14324E-05	0.00438
511012.5	4276387.62	9676.90458	0.00408	0.03139	7.77063E-07	2.49610	4.64295E-05	0.00413
511077.94	4276401.42	11884.14304	0.00501	0.03588	8.88213E-07	1.08085	2.01047E-05	0.00503
511037.26	4276343.4	9637.69105	0.00406	0.03157	7.81519E-07	1.50148	2.79288E-05	0.00409
511102.71	4276389.03	12397.95028	0.00523	0.03665	9.07275E-07	0.81719	1.52004E-05	0.00524
511104.83	4276341.98	11437.87769	0.00482	0.03479	8.61230E-07	0.75030	1.39562E-05	0.00484
511099.17	4276325	10925.08253	0.00460	0.03383	8.37465E-07	0.77304	1.43792E-05	0.00462
511149.05	4276347.29	12694.79532	0.00535	0.03688	9.12968E-07	0.57549	1.07046E-05	0.00536
511175.94	4276353.3	13546.70775	0.00571	0.03851	9.53319E-07	0.50859	9.46019E-06	0.00572
511200.71	4276325.35	13512.67035	0.00570	0.03885	9.61736E-07	0.43864	8.15907E-06	0.00570
511144.81	4276305.9	11698.19309	0.00493	0.03501	8.66676E-07	0.55751	1.03701E-05	0.00494
511132.43	4276291.39	11088.1227	0.00467	0.03385	8.37960E-07	0.59536	1.10742E-05	0.00469
511089.62	4276270.16	9616.49427	0.00405	0.03116	7.71369E-07	0.77746	1.44614E-05	0.00407
511056.01	4276256.72	8756.95504	0.00369	0.02960	7.32751E-07	0.95458	1.77560E-05	0.00371
511114.38	4276223.11	9443.54656	0.00398	0.03051	7.55278E-07	0.60427	1.12399E-05	0.00399
511056.01	4276193.39	8002.83273	0.00337	0.02779	6.87944E-07	0.75506	1.40447E-05	0.00339
511065.21	4276110.96	7336.19912	0.00309	0.02597	6.42890E-07	0.50692	9.42913E-06	0.00310
511120.4	4276103.53	8016.59744	0.00338	0.02723	6.74081E-07	0.43630	8.11554E-06	0.00339
511146.58	4276086.91	8194.94708	0.00345	0.02774	6.86707E-07	0.38991	7.25265E-06	0.00346
511054.6	4276057.54	6759.702	0.00285	0.02456	6.07985E-07	0.40757	7.58114E-06	0.00286
511079.71	4276059.31	7076.92219	0.00298	0.02512	6.21848E-07	0.40189	7.47549E-06	0.00299
511063.79	4276032.07	6672.52543	0.00281	0.02421	5.99321E-07	0.36597	6.80734E-06	0.00282
511091.03	4276029.59	6970.60315	0.00294	0.02476	6.12936E-07	0.35654	6.63194E-06	0.00295
511112.26	4276047.99	7381.01889	0.00311	0.02572	6.36701E-07	0.36905	6.86463E-06	0.00312
511148.35	4276034.55	7701.73467	0.00325	0.02665	6.59723E-07	0.33555	6.24151E-06	0.00325
511187.26	4276047.99	8335.34946	0.00351	0.02862	7.08491E-07	0.32419	6.03020E-06	0.00352
511099.18	4276852.79	36262.85763	0.01528	0.06097	1.50932E-06	2.73272	5.08308E-05	0.01534

511091.4	4276809.98	30212.26254	0.01273	0.05633	1.39445E-06	2.68766	4.99927E-05	0.01278
511126.42	4276783.8	32379.06108	0.01365	0.06095	1.50882E-06	1.69417	3.15130E-05	0.01368
511155.44	4276841.83	44291.37477	0.01867	0.07265	1.79846E-06	1.43307	2.66563E-05	0.01870
511197.19	4276843.95	50516.6304	0.02129	0.08237	2.03908E-06	1.02943	1.91482E-05	0.02131
511240	4276846.07	55074.02289	0.02321	0.09264	2.29331E-06	0.78070	1.45217E-05	0.02323
511290.59	4276850.67	57951.78709	0.02442	0.10763	2.66439E-06	0.61388	1.14187E-05	0.02444
511322.08	4276852.44	58437.83147	0.02463	0.11864	2.93695E-06	0.53238	9.90271E-06	0.02464
511271.92	4276788.58	46961.03863	0.01979	0.08881	2.19850E-06	0.61714	1.14793E-05	0.01981
511269.62	4276751.13	41758.9374	0.01760	0.08183	2.02571E-06	0.59698	1.11043E-05	0.01761
511286.9	4276724.63	39443.29841	0.01662	0.08118	2.00962E-06	0.53225	9.90029E-06	0.01664
511322.05	4276714.26	39510.06711	0.01665	0.08693	2.15196E-06	0.45006	8.37149E-06	0.01666
511347.4	4276753.44	44287.2646	0.01867	0.10040	2.48541E-06	0.42232	7.85550E-06	0.01868
511324.93	4276787.43	48349.21767	0.02038	0.10218	2.52948E-06	0.48400	9.00280E-06	0.02039
511395.79	4276750.56	43776.0791	0.01845	0.11125	2.75401E-06	0.34479	6.41338E-06	0.01846
511433.82	4276788.58	46768.90838	0.01971	0.13204	3.26866E-06	0.30495	5.67232E-06	0.01972
511474.15	4276802.99	46202.02955	0.01947	0.14680	3.63405E-06	0.26105	4.85575E-06	0.01948
511455.71	4276828.34	49743.80343	0.02097	0.15313	3.79075E-06	0.28682	5.33509E-06	0.02097
511396.49	4276844.26	54940.50464	0.02316	0.14213	3.51844E-06	0.37488	6.97308E-06	0.02317
511369.02	4276870.9	60230.65168	0.02539	0.14308	3.54196E-06	0.43746	8.13712E-06	0.02540
511333.22	4276911.69	69445.91728	0.02927	0.14515	3.59320E-06	0.54734	1.01810E-05	0.02928
511305.33	4276950.31	79936.36107	0.03369	0.14949	3.70064E-06	0.67285	1.25156E-05	0.03371
511416.46	4276868.95	57067.31961	0.02405	0.16026	3.96725E-06	0.35045	6.51866E-06	0.02406
511406.83	4276881.28	59438.88312	0.02505	0.16290	4.03261E-06	0.37023	6.88658E-06	0.02506
511400.52	4276896.01	62067.17134	0.02616	0.16815	4.16257E-06	0.38661	7.19126E-06	0.02617
511389.39	4276913.76	65806.0486	0.02774	0.17322	4.28808E-06	0.41534	7.72567E-06	0.02775
511368.34	4276928.8	70337.87165	0.02965	0.17157	4.24723E-06	0.46995	8.74146E-06	0.02966
511356.31	4276946.84	74992.56611	0.03161	0.17585	4.35318E-06	0.51254	9.53367E-06	0.03162
511350.29	4276960.98	78628.75225	0.03314	0.18134	4.48909E-06	0.54064	1.00563E-05	0.03315
511337.96	4276975.41	83326.19908	0.03512	0.18321	4.53538E-06	0.59246	1.10202E-05	0.03513
511320.22	4276989.55	89013.77494	0.03752	0.18105	4.48191E-06	0.67248	1.25087E-05	0.03753
511421.25	4276982.31	73566.38264	0.03101	0.23784	5.88775E-06	0.37259	6.93048E-06	0.03102
511435.82	4276972.74	69828.47887	0.02943	0.23446	5.80408E-06	0.34276	6.37562E-06	0.02944
511407.51	4276951.92	70263.14317	0.02961	0.20707	5.12604E-06	0.39234	7.29785E-06	0.02963
511416.67	4276936.52	66688.12985	0.02811	0.19987	4.94780E-06	0.36948	6.87263E-06	0.02812
511441.65	4276961.5	67300.57186	0.02837	0.22696	5.61842E-06	0.33053	6.14813E-06	0.02838
511428.75	4276926.11	63780.05615	0.02688	0.19730	4.88418E-06	0.34506	6.41840E-06	0.02689
511451.64	4276947.34	63976.13413	0.02696	0.21873	5.41468E-06	0.31211	5.80550E-06	0.02698
511435.82	4276912.79	61169.27702	0.02578	0.19108	4.73021E-06	0.33053	6.14813E-06	0.02579
511462.88	4276936.52	61162.00434	0.02578	0.21349	5.28497E-06	0.29394	5.46753E-06	0.02579
510943.27	4276699.02	13351.04988	0.00563	0.03578	8.85738E-07	7.08966	1.31874E-04	0.00576
510940.61	4276686.09	12960.89336	0.00546	0.03529	8.73608E-07	7.06600	1.31433E-04	0.00559
510936.99	4276669.16	12471.22397	0.00526	0.03464	8.57517E-07	7.00920	1.30377E-04	0.00539
510931.47	4276639.48	11689.99772	0.00493	0.03355	8.30534E-07	7.10249	1.32112E-04	0.00506
510924.06	4276619.89	11092.08773	0.00467	0.03261	8.07264E-07	6.32988	1.17741E-04	0.00479
510637	4276777.21	5487.45234	0.00231	0.02333	5.77537E-07	0.17199	3.19916E-06	0.00232
510548.73	4276774.18	4325.56139	0.00182	0.01992	4.93122E-07	0.10462	1.94602E-06	0.00183
510547.21	4276898.28	3833.30663	0.00162	0.01931	4.78021E-07	0.10491	1.95141E-06	0.00162
510551.25	4276958.3	3495.91041	0.00147	0.01907	4.72080E-07	0.10776	2.00442E-06	0.00148
510650.62	4277053.14	4663.98875	0.00197	0.02333	5.77537E-07	0.17630	3.27933E-06	0.00197
510672.82	4277035.48	5327.69243	0.00225	0.02459	6.08728E-07	0.19881	3.69803E-06	0.00225
510685.93	4277000.17	5983.20032	0.00252	0.02559	6.33483E-07	0.21831	4.06075E-06	0.00253
510709.64	4277123.25	5616.96955	0.00237	0.02656	6.57496E-07	0.22645	4.21216E-06	0.00237
510551.75	4277065.75	3027.33643	0.00128	0.01934	4.78764E-07	0.11248	2.09222E-06	0.00128
510585.55	4277002.69	3708.88336	0.00156	0.02016	4.99063E-07	0.12814	2.38351E-06	0.00157
510681.05	4277526.3	8458.91216	0.00357	0.02458	6.08480E-07	0.14278	2.65583E-06	0.00357
510602.09	4277543.05	5570.38245	0.00235	0.01947	4.81982E-07	0.11026	2.05093E-06	0.00235
510585.34	4277602.27	5993.28689	0.00253	0.01909	4.72575E-07	0.10210	1.89914E-06	0.00253
510520.14	4277627.4	4859.83037	0.00205	0.01762	4.36185E-07	0.08658	1.61046E-06	0.00205
510477.07	4277653.12	4501.30653	0.00190	0.01748	4.32719E-07	0.07903	1.47002E-06	0.00190
510525.39	4277547.1	4007.99742	0.00169	0.01695	4.19599E-07	0.08945	1.66384E-06	0.00169
510511.13	4277494.37	3370.86426	0.00142	0.01666	4.12420E-07	0.08808	1.63836E-06	0.00142
510485.63	4277496.53	3143.12102	0.00132	0.01624	4.02023E-07	0.08254	1.53531E-06	0.00133

510439.39	4277515.55	2942.12862	0.00124	0.01583	3.91873E-07	0.07364	1.36976E-06	0.00124
510369.82	4277592.96	3148.59362	0.00133	0.01632	4.04003E-07	0.06501	1.20924E-06	0.00133
510394.07	4277635.94	3566.11259	0.00150	0.01675	4.14648E-07	0.06821	1.26876E-06	0.00150
510368.35	4277565.04	2976.6362	0.00125	0.01611	3.98805E-07	0.06443	1.19845E-06	0.00126
510301.12	4277596.64	2684.75479	0.00113	0.01497	3.70584E-07	0.05610	1.04351E-06	0.00113
510299.29	4277636.31	2783.57809	0.00117	0.01491	3.69099E-07	0.05625	1.04630E-06	0.00117
510267.33	4277553.29	2383.50074	0.00100	0.01410	3.49047E-07	0.05127	9.53664E-07	0.00101
510193.12	4277549.61	2065.91374	0.00087	0.01249	3.09191E-07	0.04264	7.93139E-07	0.00087
510147.56	4277487.9	1887.42818	0.00080	0.01176	2.91120E-07	0.03720	6.91951E-07	0.00080
510241.24	4277332.5	1802.46312	0.00076	0.01318	3.26272E-07	0.04360	8.10996E-07	0.00076
510316.19	4277344.99	2099.65775	0.00088	0.01474	3.64890E-07	0.05466	1.01672E-06	0.00089
510275.41	4277252.05	1730.65847	0.00073	0.01292	3.19836E-07	0.04678	8.70147E-07	0.00073
510322.06	4277228.54	1820.37048	0.00077	0.01349	3.33946E-07	0.05308	9.87332E-07	0.00077
510168.14	4277155.06	1382.63194	0.00058	0.01228	3.03993E-07	0.03743	6.96229E-07	0.00058
510109.73	4277094.81	1160.7644	0.00049	0.01127	2.78990E-07	0.03127	5.81648E-07	0.00049
510170.34	4277081.59	1277.35556	0.00054	0.01209	2.99289E-07	0.03607	6.70932E-07	0.00054
510264.36	4276914.24	1642.34489	0.00069	0.01333	3.29986E-07	0.03981	7.40499E-07	0.00069
510199.1	4276903.44	1412.8277	0.00060	0.01223	3.02755E-07	0.03204	5.95970E-07	0.00060
510157.61	4276829.53	1364.63298	0.00058	0.01151	2.84931E-07	0.02610	4.85482E-07	0.00058
510201.26	4276808.79	1544.93274	0.00065	0.01209	2.99289E-07	0.02878	5.35332E-07	0.00065
510259.18	4276827.37	1762.85488	0.00074	0.01307	3.23549E-07	0.03504	6.51773E-07	0.00074
510308.02	4276868.86	1932.04903	0.00081	0.01406	3.48057E-07	0.04354	8.09880E-07	0.00082
510330.92	4276810.08	2201.42828	0.00093	0.01439	3.56226E-07	0.04372	8.13228E-07	0.00093
510353.4	4276998.95	1919.70339	0.00081	0.01509	3.73555E-07	0.05449	1.01356E-06	0.00081
510358.58	4276903.01	2159.52471	0.00091	0.01522	3.76773E-07	0.05393	1.00314E-06	0.00091
510463.34	4276900.64	2993.10559	0.00126	0.01756	4.34700E-07	0.07558	1.40585E-06	0.00126
510416.09	4276851.59	2734.77156	0.00115	0.01640	4.05984E-07	0.06300	1.17185E-06	0.00115
510411.3	4276825.86	2767.32005	0.00117	0.01621	4.01280E-07	0.06053	1.12591E-06	0.00117
510422.67	4276746.9	3068.83588	0.00129	0.01626	4.02518E-07	0.05726	1.06508E-06	0.00129
510452.36	4276669.61	3405.66723	0.00144	0.01678	4.15391E-07	0.05837	1.08573E-06	0.00144
510518.97	4276678.76	3953.44812	0.00167	0.01865	4.61683E-07	0.08129	1.51206E-06	0.00167
510563.21	4276656.9	4283.3644	0.00181	0.01992	4.93122E-07	0.09993	1.85878E-06	0.00181
510600.33	4276627.41	4528.32532	0.00191	0.02086	5.16391E-07	0.11940	2.22094E-06	0.00191
510571.86	4276593.85	4151.32453	0.00175	0.01969	4.87428E-07	0.09613	1.78810E-06	0.00175
510522.02	4276624.36	3861.71613	0.00163	0.01850	4.57969E-07	0.07658	1.42445E-06	0.00163
510525.92	4276534.3	3626.57068	0.00153	0.01795	4.44354E-07	0.07057	1.31266E-06	0.00153
510468.25	4276503.81	3226.64137	0.00136	0.01645	4.07221E-07	0.05393	1.00314E-06	0.00136
510476.7	4276581.69	3462.07091	0.00146	0.01709	4.23065E-07	0.05876	1.09298E-06	0.00146
510425.26	4276527.32	3083.6866	0.00130	0.01570	3.88655E-07	0.04595	8.54708E-07	0.00130
510398.44	4276557.45	2998.58666	0.00126	0.01525	3.77515E-07	0.04208	7.82723E-07	0.00126
510371.12	4276602	2860.96766	0.00121	0.01480	3.66376E-07	0.03917	7.28594E-07	0.00121
510328.51	4276635.8	2562.91957	0.00108	0.01403	3.47314E-07	0.03496	6.50285E-07	0.00108
510339.9	4276656.37	2604.6487	0.00110	0.01428	3.53503E-07	0.03707	6.89533E-07	0.00110
510329.33	4276697.73	2455.50389	0.00103	0.01415	3.50285E-07	0.03755	6.98461E-07	0.00104
511060.04	4278365.13	29067.49579	0.01225	0.33054	8.18255E-06	0.08404	1.56321E-06	0.01226
511053.55	4278281.17	34767.874	0.01465	0.29070	7.19631E-06	0.09372	1.74327E-06	0.01466
511449.69	4278012.31	62544.56303	0.02636	3.08774	7.64373E-05	0.08470	1.57549E-06	0.02644
511463.6	4278021.57	57698.67544	0.02432	2.47126	6.11763E-05	0.08101	1.50685E-06	0.02438
511584.5	4278030.79	36234.62211	0.01527	0.77163	1.91018E-05	0.06484	1.20608E-06	0.01529
511579.17	4278016.57	38128.10665	0.01607	0.81873	2.02677E-05	0.06661	1.23900E-06	0.01609
511643.38	4278010.53	31261.99102	0.01318	0.54131	1.34002E-05	0.06286	1.16925E-06	0.01319
511658.54	4277976.09	31627.947	0.01333	0.51476	1.27429E-05	0.06517	1.21222E-06	0.01334
511473.56	4278066.24	48627.45109	0.02049	1.91664	4.74466E-05	0.07504	1.39581E-06	0.02054
510844.05	4276334.61	6379.61927	0.00269	0.02347	5.81002E-07	0.07351	1.25278E-05	0.00270
510819	4276360.66	6245.67991	0.00263	0.02314	5.72833E-07	0.05246	9.74981E-06	0.00264
510812.25	4276338.82	6033.78023	0.00254	0.02264	5.60456E-07	0.04365	8.11647E-06	0.00255
510766.27	4276358.28	5595.00914	0.00236	0.02149	5.31987E-07	0.028350	5.27333E-06	0.00236
510788.08	4276480.9	6568.54062	0.00277	0.02363	5.84963E-07	0.052762	9.81417E-06	0.00278
510862.95	4276608.23	9322.43366	0.00393	0.02908	7.19878E-07	1.65367	3.07596E-05	0.00396
510849.39	4276591.14	8813.43259	0.00371	0.02813	6.96361E-07	1.35351	2.51764E-05	0.00374
510838.19	4276539.85	8000.7651	0.00337	0.02665	6.59723E-07	1.18290	2.20029E-05	0.00339

North Entry Area Plan Project

2020

Unmitigated at Sensitive Receptors

Construction Annual PM2.5 Total (Exhaust + Fugitive Dust)

Annual Average Onsite PM2.5 Total Emission Rate (grams/m2/sec):	1.15033E-07
Annual Average Offsite PM2.5 Total Emission Rate - North Road Segment (grams/sec):	5.59595E-04
Annual Average Offsite PM2.5 Total Emission Rate - South Road Segment (grams/sec):	4.20476E-04

X (m)	Y (m)	Onsite Annual PM2.5 Total w/Unit Emissions	Onsite Annual PM2.5 Total w/Actual Emissions	Offsite North Segment Annual PM2.5 Total w/Unit Emissions	Offsite North Segment Annual PM2.5 Total w/Actual Emissions	Offsite South Segment Annual PM2.5 Total w/Unit Emissions	Offsite South Segment Annual PM2.5 Total w/Actual Emissions	Total Annual PM2.5 Total
		(ug/m3)	(ug/m3)	(ug/m3)	(ug/m3)	(ug/m3)	(ug/m3)	(ug/m3)
511141.17	4277077.82	143983.886	0.01656	0.10570	5.91492E-05	3.61480	1.51994E-03	0.01814
511177.3	4277063.56	136457.4435	0.01570	0.12313	6.89030E-05	2.21847	9.32814E-04	0.01670
511115.23	4277044.7	103975.2279	0.01196	0.08728	4.88415E-05	4.28994	1.80382E-03	0.01381
511127.93	4277027.53	97231.93682	0.01118	0.08936	5.00054E-05	3.28742	1.38228E-03	0.01262
511112.48	4276990.1	72604.83919	0.00835	0.07821	4.37659E-05	3.46104	1.45528E-03	0.00985
511152.66	4277006.58	93009.69074	0.01070	0.09637	5.39282E-05	2.25686	9.48956E-04	0.01170
511185.29	4276993.19	92931.53969	0.01069	0.10786	6.03579E-05	1.59504	6.70676E-04	0.01142
511245.73	4277021.01	107435.162	0.01236	0.14969	8.37658E-05	1.13766	4.78359E-04	0.01292
511278.7	4277033.03	108845.3984	0.01252	0.18097	1.01270E-04	0.95695	4.02375E-04	0.01302
511308.58	4277036.12	105295.8119	0.01211	0.20876	1.16821E-04	0.79668	3.34985E-04	0.01256
511319.91	4277044.7	106378.1768	0.01224	0.22776	1.27453E-04	0.75252	3.16417E-04	0.01268
511336.05	4277053.98	106408.4588	0.01224	0.25484	1.42607E-04	0.68436	2.87757E-04	0.01267
511350.3	4277017.64	92493.80929	0.01064	0.22730	1.27196E-04	0.58893	2.47631E-04	0.01101
511371.36	4277040.35	94945.63707	0.01092	0.27084	1.51561E-04	0.52655	2.21402E-04	0.01129
511359.18	4277004.82	87778.85979	0.01010	0.22212	1.24297E-04	0.54667	2.29862E-04	0.01045
511380.24	4277027.53	89879.00693	0.01034	0.26205	1.46642E-04	0.49100	2.06454E-04	0.01069
511370.17	4276993.1	83365.94118	0.00959	0.21948	1.22820E-04	0.50372	2.11802E-04	0.00992
511391.78	4277015.07	84842.8157	0.00976	0.25569	1.43083E-04	0.45199	1.90051E-04	0.01009
511417.05	4277042.36	85822.77667	0.00987	0.30058	1.68203E-04	0.39442	1.65844E-04	0.01021
511377.68	4276982.47	79967.90391	0.00920	0.21522	1.20436E-04	0.47617	2.00218E-04	0.00952
511400.94	4277005	81099.08236	0.00933	0.25031	1.40072E-04	0.42455	1.78513E-04	0.00965
511412.84	4276995.66	77289.28017	0.00889	0.24678	1.38097E-04	0.39383	1.65596E-04	0.00919
511437.57	4277020.75	77445.41324	0.00891	0.28104	1.57269E-04	0.34754	1.46132E-04	0.00921
511426.67	4277032.47	81781.97923	0.00941	0.29152	1.63133E-04	0.37124	1.56098E-04	0.00973
511447.91	4277011.04	73902.85569	0.00850	0.27302	1.52781E-04	0.32709	1.37534E-04	0.00879
511458.35	4276998.96	70224.72977	0.00808	0.26299	1.47168E-04	0.30813	1.29561E-04	0.00835
511467.33	4276989.25	67391.86781	0.00775	0.25546	1.42954E-04	0.29293	1.23170E-04	0.00802
511477.22	4276977.16	64273.83517	0.00739	0.24638	1.37873E-04	0.27761	1.16728E-04	0.00765
511488.57	4276969.65	61680.44219	0.00710	0.24158	1.35187E-04	0.26185	1.10102E-04	0.00734
511498.09	4276955.18	58721.04041	0.00675	0.23157	1.29585E-04	0.24954	1.04926E-04	0.00699
511388.39	4276972.03	76385.135	0.00879	0.21301	1.19199E-04	0.44313	1.86326E-04	0.00909
511399.38	4276962.14	73074.91722	0.00841	0.21101	1.18080E-04	0.41336	1.73808E-04	0.00870
511400.53	4278315.27	31520.27527	0.00363	2.07337	1.16025E-03	0.06912	2.90633E-05	0.00482
511340.62	4278311.18	34958.6277	0.00402	5.39671	3.01997E-03	0.07837	3.29527E-05	0.00707
511345.14	4278296.52	35942.99635	0.00413	5.28159	2.95555E-03	0.07891	3.31798E-05	0.00712
511364.54	4278312.47	33720.90116	0.00388	3.42120	1.91449E-03	0.07473	3.14222E-05	0.00582
511209.12	4276947.27	78040.32853	0.00898	0.10628	5.94738E-05	1.17553	4.94282E-04	0.00953
511176.13	4276927.62	66485.68848	0.00765	0.09037	5.05706E-05	1.45589	6.12167E-04	0.00831
511219.65	4276925.86	72609.36368	0.00835	0.10489	5.86959E-05	1.03479	4.35105E-04	0.00885
511196.49	4276892.17	60574.16495	0.00697	0.09036	5.05650E-05	1.13906	4.78948E-04	0.00750
511003.4	4276731.86	17485.25777	0.00201	0.04183	2.34079E-05	10.36559	4.35848E-03	0.00639
510998.1	4276717.84	16641.23692	0.00191	0.04082	2.28427E-05	11.09401	4.66477E-03	0.00660
511028.47	4276724.85	18832.09233	0.00217	0.04393	2.45830E-05	5.45369	2.29315E-03	0.00448
511051.99	4276724.69	20504.85085	0.00236	0.04636	2.59428E-05	3.62046	1.52232E-03	0.00391
511131.57	4276736.84	28773.53077	0.00331	0.05827	3.26076E-05	1.43418	6.03039E-04	0.00395
511001.84	4276671.43	15298.95685	0.00176	0.03941	2.20536E-05	7.70438	3.23951E-03	0.00502
511001.84	4276650.09	14660.14888	0.00169	0.03862	2.16116E-05	6.91395	2.90715E-03	0.00462
511020.22	4276632.96	14965.76141	0.00172	0.03930	2.19921E-05	4.41557	1.85664E-03	0.00360

511038.75	4276665.82	17128.83818	0.00197	0.04241	2.37324E-05	3.65875	1.53842E-03	0.00353
511039.53	4276636.23	16131.45345	0.00186	0.04126	2.30889E-05	3.28189	1.37996E-03	0.00326
511082.2	4276682.64	20780.84991	0.00239	0.04799	2.68550E-05	2.12660	8.94185E-04	0.00331
511107.74	4276673.92	22370.66526	0.00257	0.05082	2.84386E-05	1.56697	6.58874E-04	0.00326
511082.67	4276634.05	18746.68195	0.00216	0.04586	2.56630E-05	1.84176	7.74416E-04	0.00296
511110.54	4276628.29	20320.80244	0.00234	0.04863	2.72131E-05	1.35728	5.70704E-04	0.00294
511127.99	4276630.94	21621.53405	0.00249	0.05063	2.83323E-05	1.16489	4.89808E-04	0.00301
511125.03	4276675.95	23930.36538	0.00275	0.05318	2.97593E-05	1.32193	5.55840E-04	0.00334
511144.81	4276679.06	25818.26761	0.00297	0.05587	3.12646E-05	1.10849	4.66094E-04	0.00347
511150.72	4276637.95	23579.15768	0.00271	0.05340	2.98824E-05	0.97630	4.10511E-04	0.00315
511169.1	4276687.47	28507.89733	0.00328	0.05940	3.32400E-05	0.91319	3.83975E-04	0.00370
511171.75	4276641.37	25220.86774	0.00290	0.05566	3.11471E-05	0.83989	3.53154E-04	0.00329
510972.24	4276568.62	11568.08874	0.00133	0.03388	1.89591E-05	9.54637	4.01402E-03	0.00536
510970.09	4276558.27	11298.68078	0.00130	0.03343	1.87073E-05	9.54705	4.01431E-03	0.00533
510968.79	4276547.92	11077.3509	0.00127	0.03307	1.85058E-05	9.43642	3.96779E-03	0.00526
510965.99	4276537.57	10821.04958	0.00124	0.03263	1.82596E-05	9.71816	4.08625E-03	0.00535
510988.84	4276570.99	12157.67891	0.00140	0.03494	1.95523E-05	6.39917	2.69070E-03	0.00411
510985.39	4276561.72	11847.34955	0.00136	0.03443	1.92669E-05	6.63621	2.79037E-03	0.00417
511025.27	4276572.93	13512.5005	0.00155	0.03746	2.09624E-05	3.34471	1.40637E-03	0.00298
511039.72	4276569.26	14102.822	0.00162	0.03867	2.16395E-05	2.70022	1.13538E-03	0.00278
511021.39	4276549	12778.73034	0.00147	0.03635	2.03413E-05	3.29799	1.38673E-03	0.00288
511014.5	4276530.03	12131.16781	0.00140	0.03528	1.97425E-05	3.46454	1.45676E-03	0.00287
511041.66	4276545.12	13560.36389	0.00156	0.03798	2.12534E-05	2.46950	1.03837E-03	0.00262
511034.33	4276536.5	13022.60854	0.00150	0.03703	2.07218E-05	2.67823	1.12613E-03	0.00264
510959.53	4276510.2	10217.44197	0.00118	0.03157	1.76664E-05	10.39956	4.37277E-03	0.00557
510971.81	4276510.84	10541.47934	0.00121	0.03221	1.80246E-05	7.51261	3.15887E-03	0.00439
510964.91	4276497.69	10163.24282	0.00117	0.03151	1.76328E-05	8.60838	3.61962E-03	0.00481
510962.11	4276476.57	9790.88103	0.00113	0.03084	1.72579E-05	8.77969	3.69165E-03	0.00484
510962.54	4276462.34	9600.26695	0.00110	0.03051	1.70732E-05	8.40283	3.53319E-03	0.00465
511001.78	4276503.3	11224.75587	0.00129	0.03368	1.88472E-05	3.95213	1.66178E-03	0.00297
510995.74	4276530.46	11558.75287	0.00133	0.03411	1.90878E-05	4.76764	2.00468E-03	0.00335
511026.57	4276504.16	11984.217	0.00138	0.03531	1.97593E-05	2.73723	1.15094E-03	0.00255
511041.44	4276504.59	12586.84033	0.00145	0.03659	2.04756E-05	2.24825	9.45336E-04	0.00241
511034.33	4276471.61	11620.82701	0.00134	0.03495	1.95579E-05	2.29624	9.65514E-04	0.00232
511029.15	4276461.26	11244.09167	0.00129	0.03424	1.91605E-05	2.39894	1.00870E-03	0.00232
511013.2	4276427.63	10262.13952	0.00118	0.03238	1.81197E-05	2.76506	1.16264E-03	0.00236
511012.5	4276387.62	9676.90458	0.00111	0.03139	1.75657E-05	2.49610	1.04955E-03	0.00218
511077.94	4276401.42	11884.14304	0.00137	0.03588	2.00783E-05	1.08085	4.54472E-04	0.00184
511037.26	4276343.4	9637.69105	0.00111	0.03157	1.76664E-05	1.50148	6.31337E-04	0.00176
511102.71	4276389.03	12397.95028	0.00143	0.03665	2.05092E-05	0.81719	3.43609E-04	0.00179
511104.83	4276341.98	11437.87769	0.00132	0.03479	1.94683E-05	0.75030	3.15483E-04	0.00165
511099.17	4276325	10925.08253	0.00126	0.03383	1.89311E-05	0.77304	3.25045E-04	0.00160
511149.05	4276347.29	12694.79532	0.00146	0.03688	2.06379E-05	0.57549	2.41980E-04	0.00172
511175.94	4276353.3	13546.70775	0.00156	0.03851	2.15500E-05	0.50859	2.13850E-04	0.00179
511200.71	4276325.35	13512.67035	0.00155	0.03885	2.17403E-05	0.43864	1.84438E-04	0.00176
511144.81	4276305.9	11698.19309	0.00135	0.03501	1.95914E-05	0.55751	2.34420E-04	0.00160
511132.43	4276291.39	11088.1227	0.00128	0.03385	1.89423E-05	0.59536	2.50335E-04	0.00154
511089.62	4276270.16	9616.49427	0.00111	0.03116	1.74370E-05	0.77746	3.26903E-04	0.00145
511056.01	4276256.72	8756.95504	0.00101	0.02960	1.65640E-05	0.95458	4.01378E-04	0.00143
511114.38	4276223.11	9443.54656	0.00109	0.03051	1.70732E-05	0.60427	2.54081E-04	0.00136
511056.01	4276193.39	8002.83273	0.00092	0.02779	1.55511E-05	0.75506	3.17485E-04	0.00125
511065.21	4276110.96	7336.19912	0.00084	0.02597	1.45327E-05	0.50692	2.13148E-04	0.00107
511120.4	4276103.53	8016.59744	0.00092	0.02723	1.52378E-05	0.43630	1.83454E-04	0.00112
511146.58	4276086.91	8194.94708	0.00094	0.02774	1.55232E-05	0.38991	1.63948E-04	0.00112
511054.6	4276057.54	6759.702	0.00078	0.02456	1.37437E-05	0.40757	1.71373E-04	0.00096
511079.71	4276059.31	7076.92219	0.00081	0.02512	1.40570E-05	0.40189	1.68985E-04	0.00100
511063.79	4276032.07	6672.52543	0.00077	0.02421	1.35478E-05	0.36597	1.53882E-04	0.00093
511091.03	4276029.59	6970.60315	0.00080	0.02476	1.38556E-05	0.35654	1.49917E-04	0.00097
511112.26	4276047.99	7381.01889	0.00085	0.02572	1.43928E-05	0.36905	1.55177E-04	0.00102
511148.35	4276034.55	7701.73467	0.00089	0.02665	1.49132E-05	0.33555	1.41091E-04	0.00104
511187.26	4276047.99	8335.34946	0.00096	0.02862	1.60156E-05	0.32419	1.36314E-04	0.00111
511099.18	4276852.79	36262.85763	0.00417	0.06097	3.41185E-05	2.73272	1.14904E-03	0.00535

511091.4	4276809.98	30212.26254	0.00348	0.05633	3.15220E-05	2.68766	1.13010E-03	0.00464
511126.42	4276783.8	32379.06108	0.00372	0.06095	3.41073E-05	1.69417	7.12358E-04	0.00447
511155.44	4276841.83	44291.37477	0.00509	0.07265	4.06546E-05	1.43307	6.02572E-04	0.00574
511197.19	4276843.95	50516.6304	0.00581	0.08237	4.60939E-05	1.02943	4.32851E-04	0.00629
511240	4276846.07	55074.02289	0.00634	0.09264	5.18409E-05	0.78070	3.28266E-04	0.00672
511290.59	4276850.67	57951.78709	0.00667	0.10763	6.02292E-05	0.61388	2.58122E-04	0.00698
511322.08	4276852.44	58437.83147	0.00672	0.11864	6.63904E-05	0.53238	2.23853E-04	0.00701
511271.92	4276788.58	46961.03863	0.00540	0.08881	4.96976E-05	0.61714	2.59493E-04	0.00571
511269.62	4276751.13	41758.9374	0.00480	0.08183	4.57917E-05	0.59698	2.51016E-04	0.00510
511286.9	4276724.63	39443.29841	0.00454	0.08118	4.54279E-05	0.53225	2.23798E-04	0.00481
511322.05	4276714.26	39510.06711	0.00454	0.08693	4.86456E-05	0.45006	1.89240E-04	0.00478
511347.4	4276753.44	44287.2646	0.00509	0.10040	5.61834E-05	0.42232	1.77575E-04	0.00533
511324.93	4276787.43	48349.21767	0.00556	0.10218	5.71794E-05	0.48400	2.03510E-04	0.00582
511395.79	4276750.56	43776.0791	0.00504	0.11125	6.22550E-05	0.34479	1.44976E-04	0.00524
511433.82	4276788.58	46768.90838	0.00538	0.13204	7.38889E-05	0.30495	1.28224E-04	0.00558
511474.15	4276802.99	46202.02955	0.00531	0.14680	8.21486E-05	0.26105	1.09765E-04	0.00551
511455.71	4276828.34	49743.80343	0.00572	0.15313	8.56908E-05	0.28682	1.20601E-04	0.00593
511396.49	4276844.26	54940.50464	0.00632	0.14213	7.95353E-05	0.37488	1.57628E-04	0.00656
511369.02	4276870.9	60230.65168	0.00693	0.14308	8.00669E-05	0.43746	1.83942E-04	0.00719
511333.22	4276911.69	69445.91728	0.00799	0.14515	8.12252E-05	0.54734	2.30143E-04	0.00830
511305.33	4276950.31	79936.36107	0.00920	0.14949	8.36539E-05	0.67285	2.82917E-04	0.00956
511416.46	4276868.95	57067.31961	0.00656	0.16026	8.96807E-05	0.35045	1.47356E-04	0.00680
511406.83	4276881.28	59438.88312	0.00684	0.16290	9.11581E-05	0.37023	1.55673E-04	0.00708
511400.52	4276896.01	62067.17134	0.00714	0.16815	9.40959E-05	0.38661	1.62560E-04	0.00740
511389.39	4276913.76	65806.0486	0.00757	0.17322	9.69331E-05	0.41534	1.74641E-04	0.00784
511368.34	4276928.8	70337.87165	0.00809	0.17157	9.60097E-05	0.46995	1.97603E-04	0.00838
511356.31	4276946.84	74992.56611	0.00863	0.17585	9.84048E-05	0.51254	2.15511E-04	0.00894
511350.29	4276960.98	78628.75225	0.00904	0.18134	1.01477E-04	0.54064	2.27326E-04	0.00937
511337.96	4276975.41	83326.19908	0.00959	0.18321	1.02523E-04	0.59246	2.49115E-04	0.00994
511320.22	4276989.55	89013.77494	0.01024	0.18105	1.01315E-04	0.67248	2.82762E-04	0.01062
511421.25	4276982.31	73566.38264	0.00846	0.23784	1.33094E-04	0.37259	1.56665E-04	0.00875
511435.82	4276972.74	69828.47887	0.00803	0.23446	1.31203E-04	0.34276	1.44122E-04	0.00831
511407.51	4276951.92	70263.14317	0.00808	0.20707	1.15875E-04	0.39234	1.64970E-04	0.00836
511416.67	4276936.52	66688.12985	0.00767	0.19987	1.11846E-04	0.36948	1.55358E-04	0.00794
511441.65	4276961.5	67300.57186	0.00774	0.22696	1.27006E-04	0.33053	1.38980E-04	0.00801
511428.75	4276926.11	63780.05615	0.00734	0.19730	1.10408E-04	0.34506	1.45090E-04	0.00759
511451.64	4276947.34	63976.13413	0.00736	0.21873	1.22400E-04	0.31211	1.31235E-04	0.00761
511435.82	4276912.79	61169.27702	0.00704	0.19108	1.06927E-04	0.33053	1.38980E-04	0.00728
511462.88	4276936.52	61162.00434	0.00704	0.21349	1.19468E-04	0.29394	1.23595E-04	0.00728
510943.27	4276699.02	13351.04988	0.00154	0.03578	2.00223E-05	7.08966	2.98103E-03	0.00454
510940.61	4276686.09	12960.89336	0.00149	0.03529	1.97481E-05	7.06600	2.97108E-03	0.00448
510936.99	4276669.16	12471.22397	0.00143	0.03464	1.93844E-05	7.00920	2.94720E-03	0.00440
510931.47	4276639.48	11689.99772	0.00134	0.03355	1.87744E-05	7.10249	2.98643E-03	0.00435
510924.06	4276619.89	11092.08773	0.00128	0.03261	1.82484E-05	6.32988	2.66156E-03	0.00396
510637	4276777.21	5487.45234	0.00063	0.02333	1.30554E-05	0.17199	7.23177E-05	0.00072
510548.73	4276774.18	4325.56139	0.00050	0.01992	1.11471E-05	0.10462	4.39902E-05	0.00055
510547.21	4276898.28	3833.30663	0.00044	0.01931	1.08058E-05	0.10491	4.41122E-05	0.00050
510551.25	4276958.3	3495.91041	0.00040	0.01907	1.06715E-05	0.10776	4.53105E-05	0.00046
510650.62	4277053.14	4663.98875	0.00054	0.02333	1.30554E-05	0.17630	7.41300E-05	0.00062
510672.82	4277035.48	5327.69243	0.00061	0.02459	1.37604E-05	0.19881	8.35949E-05	0.00071
510685.93	4277000.17	5983.20032	0.00069	0.02559	1.43200E-05	0.21831	9.17942E-05	0.00079
510709.64	4277123.25	5616.96955	0.00065	0.02656	1.48628E-05	0.22645	9.52168E-05	0.00076
510551.75	4277065.75	3027.33643	0.00035	0.01934	1.08226E-05	0.11248	4.72952E-05	0.00041
510585.55	4277002.69	3708.88336	0.00043	0.02016	1.12814E-05	0.12814	5.38798E-05	0.00049
510681.05	4277526.3	8458.91216	0.00097	0.02458	1.37548E-05	0.14278	6.00356E-05	0.00105
510602.09	4277543.05	5570.38245	0.00064	0.01947	1.08953E-05	0.11026	4.63617E-05	0.00070
510585.34	4277602.27	5993.28689	0.00069	0.01909	1.06827E-05	0.10210	4.29306E-05	0.00074
510520.14	4277627.4	4859.83037	0.00056	0.01762	9.86007E-06	0.08658	3.64048E-05	0.00061
510477.07	4277653.12	4501.30653	0.00052	0.01748	9.78172E-06	0.07903	3.32302E-05	0.00056
510525.39	4277547.1	4007.99742	0.00046	0.01695	9.48514E-06	0.08945	3.76116E-05	0.00051
510511.13	4277494.37	3370.86426	0.00039	0.01666	9.32286E-06	0.08808	3.70355E-05	0.00043
510485.63	4277496.53	3143.12102	0.00036	0.01624	9.08783E-06	0.08254	3.47061E-05	0.00041

510439.39	4277515.55	2942.12862	0.00034	0.01583	8.85839E-06	0.07364	3.09639E-05	0.00038
510369.82	4277592.96	3148.59362	0.00036	0.01632	9.13259E-06	0.06501	2.73352E-05	0.00040
510394.07	4277635.94	3566.11259	0.00041	0.01675	9.37322E-06	0.06821	2.86807E-05	0.00045
510368.35	4277565.04	2976.6362	0.00034	0.01611	9.01508E-06	0.06443	2.70913E-05	0.00038
510301.12	4277596.64	2684.75479	0.00031	0.01497	8.37714E-06	0.05610	2.35887E-05	0.00034
510299.29	4277636.31	2783.57809	0.00032	0.01491	8.34356E-06	0.05625	2.36518E-05	0.00035
510267.33	4277553.29	2383.50074	0.00027	0.01410	7.89029E-06	0.05127	2.15578E-05	0.00030
510193.12	4277549.61	2065.91374	0.00024	0.01249	6.98934E-06	0.04264	1.79291E-05	0.00026
510147.56	4277487.9	1887.42818	0.00022	0.01176	6.58084E-06	0.03720	1.56417E-05	0.00024
510241.24	4277332.5	1802.46312	0.00021	0.01318	7.37546E-06	0.04360	1.83328E-05	0.00023
510316.19	4277344.99	2099.65775	0.00024	0.01474	8.24843E-06	0.05466	2.29832E-05	0.00027
510275.41	4277252.05	1730.65847	0.00020	0.01292	7.22997E-06	0.04678	1.96699E-05	0.00023
510322.06	4277228.54	1820.37048	0.00021	0.01349	7.54894E-06	0.05308	2.23189E-05	0.00024
510168.14	4277155.06	1382.63194	0.00016	0.01228	6.87183E-06	0.03743	1.57384E-05	0.00018
510109.73	4277094.81	1160.7644	0.00013	0.01127	6.30664E-06	0.03127	1.31483E-05	0.00015
510170.34	4277081.59	1277.35556	0.00015	0.01209	6.76551E-06	0.03607	1.51666E-05	0.00017
510264.36	4276914.24	1642.34489	0.00019	0.01333	7.45940E-06	0.03981	1.67392E-05	0.00021
510199.1	4276903.44	1412.8277	0.00016	0.01223	6.84385E-06	0.03204	1.34721E-05	0.00018
510157.61	4276829.53	1364.63298	0.00016	0.01151	6.44094E-06	0.02610	1.09744E-05	0.00017
510201.26	4276808.79	1544.93274	0.00018	0.01209	6.76551E-06	0.02878	1.21013E-05	0.00020
510259.18	4276827.37	1762.85488	0.00020	0.01307	7.31391E-06	0.03504	1.47335E-05	0.00022
510308.02	4276868.86	1932.04903	0.00022	0.01406	7.86791E-06	0.04354	1.83075E-05	0.00025
510330.92	4276810.08	2201.42828	0.00025	0.01439	8.05257E-06	0.04372	1.83832E-05	0.00028
510353.4	4276998.95	1919.70339	0.00022	0.01509	8.44429E-06	0.05449	2.29117E-05	0.00025
510358.58	4276903.01	2159.52471	0.00025	0.01522	8.51704E-06	0.05393	2.26763E-05	0.00028
510463.34	4276900.64	2993.10559	0.00034	0.01756	9.82649E-06	0.07558	3.17796E-05	0.00039
510416.09	4276851.59	2734.77156	0.00031	0.01640	9.17736E-06	0.06300	2.64900E-05	0.00035
510411.3	4276825.86	2767.32005	0.00032	0.01621	9.07104E-06	0.06053	2.54514E-05	0.00035
510422.67	4276746.9	3068.83588	0.00035	0.01626	9.09902E-06	0.05726	2.40765E-05	0.00039
510452.36	4276669.61	3405.66723	0.00039	0.01678	9.39001E-06	0.05837	2.45432E-05	0.00043
510518.97	4276678.76	3953.44812	0.00045	0.01865	1.04364E-05	0.08129	3.41805E-05	0.00050
510563.21	4276656.9	4283.3644	0.00049	0.01992	1.11471E-05	0.09993	4.20182E-05	0.00055
510600.33	4276627.41	4528.32532	0.00052	0.02086	1.16732E-05	0.11940	5.02049E-05	0.00058
510571.86	4276593.85	4151.32453	0.00048	0.01969	1.10184E-05	0.09613	4.04204E-05	0.00053
510522.02	4276624.36	3861.71613	0.00044	0.01850	1.03525E-05	0.07658	3.22001E-05	0.00049
510525.92	4276534.3	3626.57068	0.00042	0.01795	1.00447E-05	0.07057	2.96730E-05	0.00046
510468.25	4276503.81	3226.64137	0.00037	0.01645	9.20534E-06	0.05393	2.26763E-05	0.00040
510476.7	4276581.69	3462.07091	0.00040	0.01709	9.56348E-06	0.05876	2.47072E-05	0.00043
510425.26	4276527.32	3083.6866	0.00035	0.01570	8.78564E-06	0.04595	1.93209E-05	0.00038
510398.44	4276557.45	2998.58666	0.00034	0.01525	8.53383E-06	0.04208	1.76936E-05	0.00037
510371.12	4276602	2860.96766	0.00033	0.01480	8.28201E-06	0.03917	1.64701E-05	0.00035
510328.51	4276635.8	2562.91957	0.00029	0.01403	7.85112E-06	0.03496	1.46998E-05	0.00032
510339.9	4276656.37	2604.6487	0.00030	0.01428	7.99102E-06	0.03707	1.55871E-05	0.00032
510329.33	4276697.73	2455.50389	0.00028	0.01415	7.91827E-06	0.03755	1.57889E-05	0.00031
511060.04	4278365.13	29067.49579	0.00334	0.33054	1.84969E-04	0.08404	3.53368E-05	0.00356
511053.55	4278281.17	34767.874	0.00400	0.29070	1.62674E-04	0.09372	3.94070E-05	0.00420
511449.69	4278012.31	62544.56303	0.00719	3.08774	1.72788E-03	0.08470	3.56143E-05	0.00896
511463.6	4278021.57	57698.67544	0.00664	2.47126	1.38291E-03	0.08101	3.40628E-05	0.00805
511584.5	4278030.79	36234.62211	0.00417	0.77163	4.31800E-04	0.06484	2.72637E-05	0.00463
511579.17	4278016.57	38128.10665	0.00439	0.81873	4.58157E-04	0.06661	2.80079E-05	0.00487
511643.38	4278010.53	31261.99102	0.00360	0.54131	3.02914E-04	0.06286	2.64311E-05	0.00393
511658.54	4277976.09	31627.947	0.00364	0.51476	2.88057E-04	0.06517	2.74024E-05	0.00395
511473.56	4278066.24	48627.45109	0.00559	1.91664	1.07254E-03	0.07504	3.15525E-05	0.00670
510844.05	4276334.61	6379.61927	0.00073	0.02347	1.31337E-05	0.67351	2.83195E-04	0.00103
510819	4276360.66	6245.67991	0.00072	0.02314	1.29490E-05	0.52416	2.20397E-04	0.00095
510812.25	4276338.82	6033.78023	0.00069	0.02264	1.26692E-05	0.43635	1.83475E-04	0.00089
510766.27	4276358.28	5595.00914	0.00064	0.02149	1.20257E-05	0.28350	1.19205E-04	0.00077
510788.08	4276480.9	6568.54062	0.00076	0.02363	1.32232E-05	0.52762	2.21852E-04	0.00099
510862.95	4276608.23	9322.43366	0.00107	0.02908	1.62730E-05	1.65367	6.95329E-04	0.00178
510849.39	4276591.14	8813.43259	0.00101	0.02813	1.57414E-05	1.35351	5.69119E-04	0.00160
510838.19	4276539.85	8000.7651	0.00092	0.02665	1.49132E-05	1.18290	4.97381E-04	0.00143

North Entry Area Plan Project

2021

Unmitigated at Sensitive Receptors

Construction Annual PM2.5 Total (Exhaust + Fugitive Dust)

Annual Average Onsite PM2.5 Total Emission Rate (grams/m2/sec):	8.28458E-08
Annual Average Offsite PM2.5 Total Emission Rate - North Road Segment (grams/sec):	4.27787E-04
Annual Average Offsite PM2.5 Total Emission Rate - South Road Segment (grams/sec):	3.21436E-04

X (m)	Y (m)	Onsite Annual PM2.5 Total	Onsite Annual PM2.5 Total	Offsite North Segment Annual PM2.5 Total	Offsite North Segment Annual PM2.5 Total	Offsite South Segment Annual PM2.5 Total	Offsite South Segment Annual PM2.5 Total	Total
		w/Unit Emissions (ug/m3)	w/Actual Emissions (ug/m3)	w/Unit Emissions (ug/m3)	w/Actual Emissions (ug/m3)	w/Unit Emissions (ug/m3)	w/Actual Emissions (ug/m3)	Annual PM2.5 Total (ug/m3)
511141.17	4277077.82	143983.886	0.01193	0.10570	4.52170E-05	3.61480	1.16193E-03	0.01314
511177.3	4277063.56	136457.4435	0.01130	0.12313	5.26734E-05	2.21847	7.13096E-04	0.01207
511115.23	4277044.7	103975.2279	0.00861	0.08728	3.73372E-05	4.28994	1.37894E-03	0.01003
511127.93	4277027.53	97231.93682	0.00806	0.08936	3.82270E-05	3.28742	1.05670E-03	0.00915
511112.48	4276990.1	72604.83919	0.00602	0.07821	3.34572E-05	3.46104	1.11250E-03	0.00716
511152.66	4277006.58	93009.69074	0.00771	0.09637	4.12258E-05	2.25686	7.25436E-04	0.00847
511185.29	4276993.19	92931.53969	0.00770	0.10786	4.61411E-05	1.59504	5.12703E-04	0.00826
511245.73	4277021.01	107435.162	0.00890	0.14969	6.40354E-05	1.13766	3.65685E-04	0.00933
511278.7	4277033.03	108845.3984	0.00902	0.18097	7.74165E-05	0.95695	3.07598E-04	0.00940
511308.58	4277036.12	105295.8119	0.00872	0.20876	8.93047E-05	0.79668	2.56082E-04	0.00907
511319.91	4277044.7	106378.1768	0.00881	0.22776	9.74327E-05	0.75252	2.41887E-04	0.00915
511336.05	4277053.98	106408.4588	0.00882	0.25484	1.09017E-04	0.68436	2.19978E-04	0.00914
511350.3	4277017.64	92493.80929	0.00766	0.22730	9.72359E-05	0.58893	1.89303E-04	0.00795
511371.36	4277040.35	94945.63707	0.00787	0.27084	1.15862E-04	0.52655	1.69252E-04	0.00815
511359.18	4277004.82	87778.85979	0.00727	0.22212	9.50200E-05	0.54667	1.75719E-04	0.00754
511380.24	4277027.53	98979.00693	0.00745	0.26205	1.12101E-04	0.49100	1.57825E-04	0.00772
511370.17	4276993.1	83365.94118	0.00691	0.21948	9.38906E-05	0.50372	1.61914E-04	0.00716
511391.78	4277015.07	84842.8157	0.00703	0.25569	1.09381E-04	0.45199	1.45286E-04	0.00728
511417.05	4277042.36	85822.77667	0.00711	0.30058	1.28584E-04	0.39442	1.26781E-04	0.00737
511377.68	4276982.47	79967.90391	0.00663	0.21522	9.20682E-05	0.47617	1.53058E-04	0.00687
511400.94	4277005	81099.08236	0.00672	0.25031	1.07079E-04	0.42455	1.36466E-04	0.00696
511412.84	4276995.66	77289.28017	0.00640	0.24678	1.05569E-04	0.39383	1.26591E-04	0.00664
511437.57	4277020.75	77445.41324	0.00642	0.28104	1.20225E-04	0.34754	1.11712E-04	0.00665
511426.67	4277032.47	81781.97923	0.00678	0.29152	1.24708E-04	0.37124	1.19330E-04	0.00702
511447.91	4277011.04	73902.85569	0.00612	0.27302	1.16794E-04	0.32709	1.05139E-04	0.00634
511458.35	4276998.96	70224.72977	0.00582	0.26299	1.12504E-04	0.30813	9.90441E-05	0.00603
511467.33	4276989.25	67391.86781	0.00558	0.25546	1.09282E-04	0.29293	9.41583E-05	0.00579
511477.22	4276977.16	64273.83517	0.00532	0.24638	1.05398E-04	0.27761	8.92339E-05	0.00552
511488.57	4276969.65	61680.44219	0.00511	0.24158	1.03345E-04	0.26185	8.41680E-05	0.00530
511498.09	4276955.18	58721.04041	0.00486	0.23157	9.90626E-05	0.24954	8.02112E-05	0.00504
511388.39	4276972.03	76385.135	0.00633	0.21301	9.11228E-05	0.44313	1.42438E-04	0.00656
511399.38	4276962.14	73074.91722	0.00605	0.21101	9.02673E-05	0.41336	1.32869E-04	0.00628
511400.53	4278315.27	31520.27527	0.00261	2.07337	8.86960E-04	0.06912	2.22177E-05	0.00352
511340.62	4278311.18	34958.6277	0.00290	5.39671	2.30864E-03	0.07837	2.51909E-05	0.00523
511345.14	4278296.52	35942.99635	0.00298	5.28159	2.25939E-03	0.07891	2.53645E-05	0.00526
511364.54	4278312.47	33720.90116	0.00279	3.42120	1.46354E-03	0.07473	2.40209E-05	0.00428
511209.12	4276947.27	78040.32853	0.00647	0.10628	4.54652E-05	1.17553	3.77858E-04	0.00689
511176.13	4276927.62	66485.68848	0.00551	0.09037	3.86591E-05	1.45589	4.67976E-04	0.00601
511219.65	4276925.86	72609.36368	0.00602	0.10489	4.48705E-05	1.03479	3.32619E-04	0.00639
511196.49	4276892.17	60574.16495	0.00502	0.09036	3.86548E-05	1.13906	3.66135E-04	0.00542
511003.4	4276731.86	17485.25777	0.00145	0.04183	1.78943E-05	10.36559	3.33187E-03	0.00480
510998.1	4276717.84	16641.23692	0.00138	0.04082	1.74623E-05	11.09401	3.56602E-03	0.00496
511028.47	4276724.85	18832.09233	0.00156	0.04393	1.87927E-05	5.45369	1.75301E-03	0.00333
511051.99	4276724.69	20504.85085	0.00170	0.04636	1.98322E-05	3.62046	1.16375E-03	0.00288
511131.57	4276736.84	28773.53077	0.00238	0.05827	2.49271E-05	1.43418	4.60997E-04	0.00287
511001.84	4276671.43	15298.95685	0.00127	0.03941	1.68591E-05	7.70438	2.47647E-03	0.00376
511001.84	4276650.09	14660.14888	0.00121	0.03862	1.65211E-05	6.91395	2.22239E-03	0.00345
511020.22	4276632.96	14965.76141	0.00124	0.03930	1.68120E-05	4.41557	1.41932E-03	0.00268

511038.75	4276665.82	17128.83818	0.00142	0.04241	1.81424E-05	3.65875	1.17605E-03	0.00261
511039.53	4276636.23	16131.45345	0.00134	0.04126	1.76505E-05	3.28189	1.05492E-03	0.00241
511082.2	4276682.64	20780.84991	0.00172	0.04799	2.05295E-05	2.12660	6.83566E-04	0.00243
511107.74	4276673.92	22370.66526	0.00185	0.05082	2.17401E-05	1.56697	5.03681E-04	0.00238
511082.67	4276634.05	18746.68195	0.00155	0.04586	1.96183E-05	1.84176	5.92008E-04	0.00216
511110.54	4276628.29	20320.80244	0.00168	0.04863	2.08033E-05	1.35728	4.36279E-04	0.00214
511127.99	4276630.94	21621.53405	0.00179	0.05063	2.16588E-05	1.16489	3.74438E-04	0.00219
511125.03	4276675.95	23930.36538	0.00198	0.05318	2.27497E-05	1.32193	4.24916E-04	0.00243
511144.81	4276679.06	25818.26761	0.00214	0.05587	2.39004E-05	1.10849	3.56309E-04	0.00252
511150.72	4276637.95	23579.15768	0.00195	0.05340	2.28438E-05	0.97630	3.13818E-04	0.00229
511169.1	4276687.47	28507.89733	0.00236	0.05940	2.54105E-05	0.91319	2.93532E-04	0.00268
511171.75	4276641.37	25220.86774	0.00209	0.05566	2.38106E-05	0.83989	2.69971E-04	0.00238
510972.24	4276568.62	11568.08874	0.00096	0.03388	1.44934E-05	9.54637	3.06855E-03	0.00404
510970.09	4276558.27	11298.68078	0.00094	0.03343	1.43009E-05	9.54705	3.06877E-03	0.00402
510968.79	4276547.92	11077.3509	0.00092	0.03307	1.41469E-05	9.43642	3.03321E-03	0.00397
510965.99	4276537.57	10821.04958	0.00090	0.03263	1.39587E-05	9.71816	3.12377E-03	0.00403
510988.84	4276570.99	12157.67891	0.00101	0.03494	1.49469E-05	6.39917	2.05692E-03	0.00308
510985.39	4276561.72	11847.34955	0.00098	0.03443	1.47287E-05	6.63621	2.13312E-03	0.00313
511025.27	4276572.93	13512.5005	0.00112	0.03746	1.60249E-05	3.34471	1.07511E-03	0.00221
511039.72	4276569.26	14102.822	0.00117	0.03867	1.65425E-05	2.70022	8.67948E-04	0.00205
511021.39	4276549	12778.73034	0.00106	0.03635	1.55500E-05	3.29799	1.06009E-03	0.00213
511014.5	4276530.03	12131.16781	0.00101	0.03528	1.50923E-05	3.46454	1.11363E-03	0.00213
511041.66	4276545.12	13560.36389	0.00112	0.03798	1.62473E-05	2.46950	7.93786E-04	0.00193
511034.33	4276536.5	13022.60854	0.00108	0.03703	1.58409E-05	2.67823	8.60880E-04	0.00196
510959.53	4276510.2	10217.44197	0.00085	0.03157	1.35052E-05	10.39956	3.34279E-03	0.00420
510971.81	4276510.84	10541.47934	0.00087	0.03221	1.37790E-05	7.51261	2.41482E-03	0.00330
510964.91	4276497.69	10163.24282	0.00084	0.03151	1.34796E-05	8.60838	2.76704E-03	0.00362
510962.11	4276476.57	9790.88103	0.00081	0.03084	1.31929E-05	8.77969	2.82211E-03	0.00365
510962.54	4276462.34	9600.26695	0.00080	0.03051	1.30518E-05	8.40283	2.70097E-03	0.00351
511001.78	4276503.3	11224.75587	0.00093	0.03368	1.44079E-05	3.95213	1.27036E-03	0.00221
510995.74	4276530.46	11558.75287	0.00096	0.03411	1.45918E-05	4.76764	1.53249E-03	0.00250
511026.57	4276504.16	11984.217	0.00099	0.03531	1.51051E-05	2.73723	8.79845E-04	0.00189
511041.44	4276504.59	12586.84033	0.00104	0.03659	1.56527E-05	2.24825	7.22669E-04	0.00178
511034.33	4276471.61	11620.82701	0.00096	0.03495	1.49511E-05	2.29624	7.38094E-04	0.00172
511029.15	4276461.26	11244.09167	0.00093	0.03424	1.46474E-05	2.39894	7.71106E-04	0.00172
511013.2	4276427.63	10262.13952	0.00085	0.03238	1.38517E-05	2.76506	8.88790E-04	0.00175
511012.5	4276387.62	9676.90458	0.00080	0.03139	1.34282E-05	2.49610	8.02337E-04	0.00162
511077.94	4276401.42	11884.14304	0.00098	0.03588	1.53490E-05	1.08085	3.47424E-04	0.00135
511037.26	4276343.4	9637.69105	0.00080	0.03157	1.35052E-05	1.50148	4.82630E-04	0.00129
511102.71	4276389.03	12397.95028	0.00103	0.03665	1.56784E-05	0.81719	2.62674E-04	0.00131
511104.83	4276341.98	11437.87769	0.00095	0.03479	1.48827E-05	0.75030	2.41174E-04	0.00120
511099.17	4276325	10925.08253	0.00091	0.03383	1.44720E-05	0.77304	2.48483E-04	0.00117
511149.05	4276347.29	12694.79532	0.00105	0.03688	1.57768E-05	0.57549	1.84983E-04	0.00125
511175.94	4276353.3	13546.70775	0.00112	0.03851	1.64741E-05	0.50859	1.63479E-04	0.00130
511200.71	4276325.35	13512.67035	0.00112	0.03885	1.66195E-05	0.43864	1.40995E-04	0.00128
511144.81	4276305.9	11698.19309	0.00097	0.03501	1.49768E-05	0.55751	1.79204E-04	0.00116
511132.43	4276291.39	11088.1227	0.00092	0.03385	1.44806E-05	0.59536	1.91370E-04	0.00112
511089.62	4276270.16	9616.49427	0.00080	0.03116	1.33298E-05	0.77746	2.49904E-04	0.00106
511056.01	4276256.72	8756.95504	0.00073	0.02960	1.26625E-05	0.95458	3.06836E-04	0.00104
511114.38	4276223.11	9443.54656	0.00078	0.03051	1.30518E-05	0.60427	1.94234E-04	0.00099
511056.01	4276193.39	8002.83273	0.00066	0.02779	1.18882E-05	0.75506	2.42704E-04	0.00092
511065.21	4276110.96	7336.19912	0.00061	0.02597	1.11096E-05	0.50692	1.62942E-04	0.00078
511120.4	4276103.53	8016.59744	0.00066	0.02723	1.16486E-05	0.43630	1.40243E-04	0.00082
511146.58	4276086.91	8194.94708	0.00068	0.02774	1.18668E-05	0.38991	1.25331E-04	0.00082
511054.6	4276057.54	6759.702	0.00056	0.02456	1.05064E-05	0.40757	1.31008E-04	0.00070
511079.71	4276059.31	7076.92219	0.00059	0.02512	1.07460E-05	0.40189	1.29182E-04	0.00073
511063.79	4276032.07	6672.52543	0.00055	0.02421	1.03567E-05	0.36597	1.17636E-04	0.00068
511091.03	4276029.59	6970.60315	0.00058	0.02476	1.05920E-05	0.35654	1.14605E-04	0.00070
511112.26	4276047.99	7381.01889	0.00061	0.02572	1.10027E-05	0.36905	1.18626E-04	0.00074
511148.35	4276034.55	7701.73467	0.00064	0.02665	1.14005E-05	0.33555	1.07858E-04	0.00076
511187.26	4276047.99	8335.34946	0.00069	0.02862	1.22433E-05	0.32419	1.04206E-04	0.00081
511099.18	4276852.79	36262.85763	0.00300	0.06097	2.60822E-05	2.73272	8.78395E-04	0.00391

511091.4	4276809.98	30212.26254	0.00250	0.05633	2.40972E-05	2.68766	8.63911E-04	0.00339
511126.42	4276783.8	32379.06108	0.00268	0.06095	2.60736E-05	1.69417	5.44567E-04	0.00325
511155.44	4276841.83	44291.37477	0.00367	0.07265	3.10787E-05	1.43307	4.60640E-04	0.00416
511197.19	4276843.95	50516.6304	0.00419	0.08237	3.52368E-05	1.02943	3.30896E-04	0.00455
511240	4276846.07	55074.02289	0.00456	0.09264	3.96302E-05	0.78070	2.50945E-04	0.00485
511290.59	4276850.67	57951.78709	0.00480	0.10763	4.60427E-05	0.61388	1.97323E-04	0.00504
511322.08	4276852.44	58437.83147	0.00484	0.11864	5.07526E-05	0.53238	1.71126E-04	0.00506
511271.92	4276788.58	46961.03863	0.00389	0.08881	3.79917E-05	0.61714	1.98371E-04	0.00413
511269.62	4276751.13	41758.9374	0.00346	0.08183	3.50058E-05	0.59698	1.91891E-04	0.00369
511286.9	4276724.63	39443.29841	0.00327	0.08118	3.47277E-05	0.53225	1.71084E-04	0.00347
511322.05	4276714.26	39510.06711	0.00327	0.08693	3.71875E-05	0.45006	1.44666E-04	0.00346
511347.4	4276753.44	44287.2646	0.00367	0.10040	4.29498E-05	0.42232	1.35749E-04	0.00385
511324.93	4276787.43	48349.21767	0.00401	0.10218	4.37112E-05	0.48400	1.55575E-04	0.00420
511395.79	4276750.56	43776.0791	0.00363	0.11125	4.75913E-05	0.34479	1.10828E-04	0.00379
511433.82	4276788.58	46768.90838	0.00387	0.13204	5.64849E-05	0.30495	9.80219E-05	0.00403
511474.15	4276802.99	46202.02955	0.00383	0.14680	6.27991E-05	0.26105	8.39109E-05	0.00397
511455.71	4276828.34	49743.80343	0.00412	0.15313	6.55070E-05	0.28682	9.21943E-05	0.00428
511396.49	4276844.26	54940.50464	0.00455	0.14213	6.08013E-05	0.37488	1.20500E-04	0.00473
511369.02	4276870.9	60230.65168	0.00499	0.14308	6.12077E-05	0.43746	1.40615E-04	0.00519
511333.22	4276911.69	69445.91728	0.00575	0.14515	6.20932E-05	0.54734	1.75935E-04	0.00599
511305.33	4276950.31	79936.36107	0.00662	0.14949	6.39498E-05	0.67285	2.16278E-04	0.00690
511416.46	4276868.95	57067.31961	0.00473	0.16026	6.85571E-05	0.35045	1.12647E-04	0.00491
511406.83	4276881.28	59438.88312	0.00492	0.16290	6.96864E-05	0.37023	1.19005E-04	0.00511
511400.52	4276896.01	62067.17134	0.00514	0.16815	7.19323E-05	0.38661	1.24270E-04	0.00534
511389.39	4276913.76	65806.0486	0.00545	0.17322	7.41012E-05	0.41534	1.33505E-04	0.00566
511368.34	4276928.8	70337.87165	0.00583	0.17157	7.33954E-05	0.46995	1.51059E-04	0.00605
511356.31	4276946.84	74992.56611	0.00621	0.17585	7.52263E-05	0.51254	1.64749E-04	0.00645
511350.29	4276960.98	78628.75225	0.00651	0.18134	7.75748E-05	0.54064	1.73781E-04	0.00677
511337.96	4276975.41	83326.19908	0.00690	0.18321	7.83748E-05	0.59246	1.90438E-04	0.00717
511320.22	4276989.55	89013.77494	0.00737	0.18105	7.74508E-05	0.67248	2.16159E-04	0.00767
511421.25	4276982.31	73566.38264	0.00609	0.23784	1.01745E-04	0.37259	1.19764E-04	0.00632
511435.82	4276972.74	69828.47887	0.00578	0.23446	1.00299E-04	0.34276	1.10175E-04	0.00600
511407.51	4276951.92	70263.14317	0.00582	0.20707	8.85818E-05	0.39234	1.26112E-04	0.00604
511416.67	4276936.52	66688.12985	0.00552	0.19987	8.55017E-05	0.36948	1.18764E-04	0.00573
511441.65	4276961.5	67300.57186	0.00558	0.22696	9.70905E-05	0.33053	1.06244E-04	0.00578
511428.75	4276926.11	63780.05615	0.00528	0.19730	8.44023E-05	0.34506	1.10915E-04	0.00548
511451.64	4276947.34	63976.13413	0.00530	0.21873	9.35698E-05	0.31211	1.00323E-04	0.00549
511435.82	4276912.79	61169.27702	0.00507	0.19108	8.17415E-05	0.33053	1.06244E-04	0.00526
511462.88	4276936.52	61162.00434	0.00507	0.21349	9.13282E-05	0.29394	9.44829E-05	0.00525
510943.27	4276699.02	13351.04988	0.00111	0.03578	1.53062E-05	7.08966	2.27887E-03	0.00340
510940.61	4276686.09	12960.89336	0.00107	0.03529	1.50966E-05	7.06600	2.27127E-03	0.00336
510936.99	4276669.16	12471.22397	0.00103	0.03464	1.48185E-05	7.00920	2.25301E-03	0.00330
510931.47	4276639.48	11689.99772	0.00097	0.03355	1.43522E-05	7.10249	2.28300E-03	0.00327
510924.06	4276619.89	11092.08773	0.00092	0.03261	1.39501E-05	6.32988	2.03465E-03	0.00297
510637	4276777.21	5487.45234	0.00045	0.02333	9.98026E-06	0.17199	5.52838E-05	0.00052
510548.73	4276774.18	4325.56139	0.00036	0.01992	8.52151E-06	0.10462	3.36286E-05	0.00040
510547.21	4276898.28	3833.30663	0.00032	0.01931	8.26056E-06	0.10491	3.37219E-05	0.00036
510551.25	4276958.3	3495.91041	0.00029	0.01907	8.15789E-06	0.10776	3.46380E-05	0.00033
510650.62	4277053.14	4663.98875	0.00039	0.02333	9.98026E-06	0.17630	5.66692E-05	0.00045
510672.82	4277035.48	5327.69243	0.00044	0.02459	1.05193E-05	0.19881	6.39047E-05	0.00052
510685.93	4277000.17	5983.20032	0.00050	0.02559	1.09471E-05	0.21831	7.01727E-05	0.00058
510709.64	4277123.25	5616.96955	0.00047	0.02656	1.13620E-05	0.22645	7.27892E-05	0.00055
510551.75	4277065.75	3027.33643	0.00025	0.01934	8.27339E-06	0.11248	3.61551E-05	0.00030
510585.55	4277002.69	3708.88336	0.00031	0.02016	8.62418E-06	0.12814	4.11888E-05	0.00036
510681.05	4277526.3	8458.91216	0.00070	0.02458	1.05150E-05	0.14278	4.58946E-05	0.00076
510602.09	4277543.05	5570.38245	0.00046	0.01947	8.32901E-06	0.11026	3.54415E-05	0.00051
510585.34	4277602.27	5993.28689	0.00050	0.01909	8.16645E-06	0.10210	3.28186E-05	0.00054
510520.14	4277627.4	4859.83037	0.00040	0.01762	7.53760E-06	0.08658	2.78299E-05	0.00044
510477.07	4277653.12	4501.30653	0.00037	0.01748	7.47771E-06	0.07903	2.54031E-05	0.00041
510525.39	4277547.1	4007.99742	0.00033	0.01695	7.25098E-06	0.08945	2.87525E-05	0.00037
510511.13	4277494.37	3370.86426	0.00028	0.01666	7.12693E-06	0.08808	2.83121E-05	0.00031
510485.63	4277496.53	3143.12102	0.00026	0.01624	6.94726E-06	0.08254	2.65313E-05	0.00029

510439.39	4277515.55	2942.12862	0.00024	0.01583	6.77186E-06	0.07364	2.36706E-05	0.00027
510369.82	4277592.96	3148.59362	0.00026	0.01632	6.98148E-06	0.06501	2.08966E-05	0.00029
510394.07	4277635.94	3566.11259	0.00030	0.01675	7.16543E-06	0.06821	2.19252E-05	0.00032
510368.35	4277565.04	2976.6362	0.00025	0.01611	6.89164E-06	0.06443	2.07101E-05	0.00027
510301.12	4277596.64	2684.75479	0.00022	0.01497	6.40397E-06	0.05610	1.80326E-05	0.00025
510299.29	4277636.31	2783.57809	0.00023	0.01491	6.37830E-06	0.05625	1.80808E-05	0.00026
510267.33	4277553.29	2383.50074	0.00020	0.01410	6.03179E-06	0.05127	1.64800E-05	0.00022
510193.12	4277549.61	2065.91374	0.00017	0.01249	5.34306E-06	0.04264	1.37060E-05	0.00019
510147.56	4277487.9	1887.42818	0.00016	0.01176	5.03077E-06	0.03720	1.19574E-05	0.00017
510241.24	4277332.5	1802.46312	0.00015	0.01318	5.63823E-06	0.04360	1.40146E-05	0.00017
510316.19	4277344.99	2099.65775	0.00017	0.01474	6.30558E-06	0.05466	1.75697E-05	0.00020
510275.41	4277252.05	1730.65847	0.00014	0.01292	5.52700E-06	0.04678	1.50368E-05	0.00016
510322.06	4277228.54	1820.37048	0.00015	0.01349	5.77084E-06	0.05308	1.70618E-05	0.00017
510168.14	4277155.06	1382.63194	0.00011	0.01228	5.25322E-06	0.03743	1.20314E-05	0.00013
510109.73	4277094.81	1160.7644	0.00010	0.01127	4.82116E-06	0.03127	1.00513E-05	0.00011
510170.34	4277081.59	1277.35556	0.00011	0.01209	5.17194E-06	0.03607	1.15942E-05	0.00012
510264.36	4276914.24	1642.34489	0.00014	0.01333	5.70240E-06	0.03981	1.27964E-05	0.00015
510199.1	4276903.44	1412.8277	0.00012	0.01223	5.23183E-06	0.03204	1.02988E-05	0.00013
510157.61	4276829.53	1364.63298	0.00011	0.01151	4.92382E-06	0.02610	8.38948E-06	0.00013
510201.26	4276808.79	1544.93274	0.00013	0.01209	5.17194E-06	0.02878	9.25093E-06	0.00014
510259.18	4276827.37	1762.85488	0.00015	0.01307	5.59117E-06	0.03504	1.12631E-05	0.00016
510308.02	4276868.86	1932.04903	0.00016	0.01406	6.01468E-06	0.04354	1.39953E-05	0.00018
510330.92	4276810.08	2201.42828	0.00018	0.01439	6.15585E-06	0.04372	1.40532E-05	0.00020
510353.4	4276998.95	1919.70339	0.00016	0.01509	6.45530E-06	0.05449	1.75151E-05	0.00018
510358.58	4276903.01	2159.52471	0.00018	0.01522	6.51091E-06	0.05393	1.73350E-05	0.00020
510463.34	4276900.64	2993.10559	0.00025	0.01756	7.51193E-06	0.07558	2.42941E-05	0.00028
510416.09	4276851.59	2734.77156	0.00023	0.01640	7.01570E-06	0.06300	2.02505E-05	0.00025
510411.3	4276825.86	2767.32005	0.00023	0.01621	6.93442E-06	0.06053	1.94565E-05	0.00026
510422.67	4276746.9	3068.83588	0.00025	0.01626	6.95581E-06	0.05726	1.84054E-05	0.00028
510452.36	4276669.61	3405.66723	0.00028	0.01678	7.17826E-06	0.05837	1.87622E-05	0.00031
510518.97	4276678.76	3953.44812	0.00033	0.01865	7.97822E-06	0.08129	2.61295E-05	0.00036
510563.21	4276656.9	4283.3644	0.00035	0.01992	8.52151E-06	0.09993	3.21211E-05	0.00040
510600.33	4276627.41	4528.32532	0.00038	0.02086	8.92363E-06	0.11940	3.83795E-05	0.00042
510571.86	4276593.85	4151.32453	0.00034	0.01969	8.42312E-06	0.09613	3.08997E-05	0.00038
510522.02	4276624.36	3861.71613	0.00032	0.01850	7.91405E-06	0.07658	2.46156E-05	0.00035
510525.92	4276534.3	3626.57068	0.00030	0.01795	7.67877E-06	0.07057	2.26837E-05	0.00033
510468.25	4276503.81	3226.64137	0.00027	0.01645	7.03709E-06	0.05393	1.73350E-05	0.00029
510476.7	4276581.69	3462.07091	0.00029	0.01709	7.31087E-06	0.05876	1.88876E-05	0.00031
510425.26	4276527.32	3083.6866	0.00026	0.01570	6.71625E-06	0.04595	1.47700E-05	0.00028
510398.44	4276557.45	2998.58666	0.00025	0.01525	6.52375E-06	0.04208	1.35260E-05	0.00027
510371.12	4276602	2860.96766	0.00024	0.01480	6.33124E-06	0.03917	1.25907E-05	0.00026
510328.51	4276635.8	2562.91957	0.00021	0.01403	6.00185E-06	0.03496	1.12374E-05	0.00023
510339.9	4276656.37	2604.6487	0.00022	0.01428	6.10879E-06	0.03707	1.19156E-05	0.00023
510329.33	4276697.73	2455.50389	0.00020	0.01415	6.05318E-06	0.03755	1.20699E-05	0.00022
511060.04	4278365.13	29067.49579	0.00241	0.33054	1.41401E-04	0.08404	2.70135E-05	0.00258
511053.55	4278281.17	34767.874	0.00288	0.29070	1.24358E-04	0.09372	3.01250E-05	0.00303
511449.69	4278012.31	62544.56303	0.00518	3.08774	1.32089E-03	0.08470	2.72256E-05	0.00653
511463.6	4278021.57	57698.67544	0.00478	2.47126	1.05717E-03	0.08101	2.60395E-05	0.00586
511584.5	4278030.79	36234.62211	0.00300	0.77163	3.30093E-04	0.06484	2.08419E-05	0.00335
511579.17	4278016.57	38128.10665	0.00316	0.81873	3.50242E-04	0.06661	2.14109E-05	0.00353
511643.38	4278010.53	31261.99102	0.00259	0.54131	2.31565E-04	0.06286	2.02055E-05	0.00284
511658.54	4277976.09	31627.947	0.00262	0.51476	2.20207E-04	0.06517	2.09480E-05	0.00286
511473.56	4278066.24	48627.45109	0.00403	1.91664	8.19913E-04	0.07504	2.41206E-05	0.00487
510844.05	4276334.61	6379.61927	0.00053	0.02347	1.00402E-05	0.67351	2.16490E-04	0.00076
510819	4276360.66	6245.67991	0.00052	0.02314	9.89898E-06	0.52416	1.68484E-04	0.00070
510812.25	4276338.82	6033.78023	0.00050	0.02264	9.68509E-06	0.43635	1.40259E-04	0.00065
510766.27	4276358.28	5595.00914	0.00046	0.02149	9.19313E-06	0.28350	9.11271E-05	0.00056
510788.08	4276480.9	6568.54062	0.00054	0.02363	1.01086E-05	0.52762	1.69596E-04	0.00072
510862.95	4276608.23	9322.43366	0.00077	0.02908	1.24400E-05	1.65367	5.31549E-04	0.00132
510849.39	4276591.14	8813.43259	0.00073	0.02813	1.20336E-05	1.35351	4.35067E-04	0.00118
510838.19	4276539.85	8000.7651	0.00066	0.02665	1.14005E-05	1.18290	3.80227E-04	0.00105

North Entry Area Plan Project

Unmitigated at Sensitive Receptors

Annual Average PM2.5 Total (Exhaust + Fugitive Dust)

X (m)	Y (m)	2019	2020	2021	Max	Maximum
		PM2.5 Total (ug/m3)	PM2.5 Total (ug/m3)	PM2.5 Total (ug/m3)	PM2.5 Total (ug/m3)	0.06 BAAQMD threshold of significance 0.3 Exceed thresholds? No
511141.17	4277077.82	0.06075458	0.018142	0.0131356	0.06075	
511177.3	4277063.56	0.05755688	0.01669884	0.01207069	0.05756	
511115.23	4277044.7	0.04390428	0.01381325	0.01003019	0.04390	
511127.93	4277027.53	0.0410436	0.01261718	0.00915018	0.04104	
511112.48	4276990.1	0.030667	0.00985101	0.00716096	0.03067	
511152.66	4277006.58	0.03924506	0.01170208	0.00847212	0.03925	
511185.29	4276993.19	0.03920009	0.01142124	0.00825783	0.03920	
511245.73	4277021.01	0.04530545	0.01292073	0.00933027	0.04531	
511278.7	4277033.03	0.04589723	0.01302447	0.0094024	0.04590	
511308.58	4277036.12	0.0443989	0.01256431	0.0090687	0.04440	
511319.91	4277044.7	0.04485473	0.01268088	0.0091523	0.04485	
511336.05	4277053.98	0.04486689	0.01267086	0.00914449	0.04487	
511350.3	4277017.64	0.03899984	0.01101468	0.00794926	0.03900	
511371.36	4277040.35	0.04003313	0.01129485	0.00815096	0.04003	
511359.18	4277004.82	0.03701173	0.01045163	0.00754285	0.03701	
511380.24	4277027.53	0.03789683	0.01069216	0.00771602	0.03790	
511370.17	4276993.1	0.03515095	0.00992447	0.00716232	0.03515	
511391.78	4277015.07	0.03577334	0.01009287	0.00728354	0.03577	
511417.05	4277042.36	0.03618641	0.01020651	0.00736542	0.03619	
511377.68	4276982.47	0.03371817	0.00951961	0.00687013	0.03372	
511400.94	4277005	0.03419483	0.00964767	0.00696226	0.03419	
511412.84	4276995.66	0.03258846	0.00919452	0.00663525	0.03259	
511437.57	4277020.75	0.03265425	0.00921219	0.00664796	0.03265	
511426.67	4277032.47	0.03448268	0.00972687	0.00701933	0.03448	
511447.91	4277011.04	0.0311606	0.00879159	0.00634447	0.03116	
511458.35	4276998.96	0.02960978	0.0083549	0.00602937	0.02961	
511467.33	4276989.25	0.02841535	0.00801842	0.00578657	0.02842	
511477.22	4276977.16	0.02710068	0.00764822	0.00551945	0.02710	
511488.57	4276969.65	0.02600724	0.00734058	0.00529748	0.02601	
511498.09	4276955.18	0.02475947	0.00698938	0.00504406	0.02476	
511388.39	4276972.03	0.03220747	0.00909234	0.00656175	0.03221	
511399.38	4276962.14	0.03081172	0.00869792	0.00627708	0.03081	
511400.53	4278315.27	0.01333743	0.00481519	0.0035205	0.01334	
511340.62	4278311.18	0.01486903	0.00707433	0.00523001	0.01487	
511345.14	4278296.52	0.01528107	0.00712337	0.00526248	0.01528	
511364.54	4278312.47	0.01429839	0.00582493	0.0042812	0.01430	
511209.12	4276947.27	0.03291607	0.00953098	0.00688863	0.03292	
511176.13	4276927.62	0.02805097	0.00831079	0.00601469	0.02805	
511219.65	4276925.86	0.03062443	0.00884628	0.00639287	0.03062	
511196.49	4276892.17	0.02555355	0.00749755	0.0054231	0.02555	
511003.4	4276731.86	0.00756334	0.00639328	0.00479835	0.00756	
510998.1	4276717.84	0.00722113	0.0066019	0.00496213	0.00722	
511028.47	4276724.85	0.00803967	0.00448404	0.00333196	0.00804	
511051.99	4276724.69	0.00871065	0.003907	0.00288232	0.00871	
511131.57	4276736.84	0.01215527	0.00394556	0.00286969	0.01216	
511001.84	4276671.43	0.00659232	0.00502145	0.00376078	0.00659	
511001.84	4276650.09	0.00630836	0.00461517	0.00345345	0.00631	
511020.22	4276632.96	0.00639071	0.00360019	0.00267599	0.00639	
511038.75	4276665.82	0.00728838	0.00353253	0.00261325	0.00729	
511039.53	4276636.23	0.00686097	0.0032587	0.00240899	0.00686	
511082.2	4276682.64	0.00879923	0.00331153	0.0024257	0.00880	
511107.74	4276673.92	0.00945894	0.00326068	0.00237874	0.00946	
511082.67	4276634.05	0.00793654	0.00295657	0.00216471	0.00794	
511110.54	4276628.29	0.00859104	0.00293548	0.00214057	0.00859	
511127.99	4276630.94	0.00913573	0.00300533	0.00218735	0.00914	
511125.03	4276675.95	0.01011181	0.00333838	0.0024302	0.01011	
511144.81	4276679.06	0.0109036	0.00346731	0.00251914	0.01090	
511150.72	4276637.95	0.00995736	0.00315278	0.0022901	0.00996	
511169.1	4276687.47	0.01203365	0.00369657	0.0026807	0.01203	
511171.75	4276641.37	0.01064681	0.00328554	0.00238322	0.01065	
510972.24	4276568.62	0.005054	0.00536369	0.00404141	0.00536	

510970.09	4276558.27	0.00494045	0.00533274	0.00401912	0.00533
510968.79	4276547.92	0.0048451	0.00526056	0.00396506	0.00526
510965.99	4276537.57	0.00474231	0.00534929	0.0040342	0.00535
510988.84	4276570.99	0.00524398	0.00410879	0.00307908	0.00524
510985.39	4276561.72	0.00511758	0.00417247	0.00312935	0.00512
511025.27	4276572.93	0.00575824	0.00298172	0.00221059	0.00576
511039.72	4276569.26	0.00599508	0.00277931	0.00205285	0.00600
511021.39	4276549	0.00544808	0.00287704	0.00213431	0.00545
511014.5	4276530.03	0.00517823	0.00287199	0.00213374	0.00518
511041.66	4276545.12	0.00576215	0.00261951	0.00193345	0.00576
511034.33	4276536.5	0.00553936	0.00264488	0.00195559	0.00554
510959.53	4276510.2	0.00450056	0.00556578	0.00420277	0.00557
510971.81	4276510.84	0.00458344	0.00438952	0.00330192	0.00458
510964.91	4276497.69	0.00444439	0.00480636	0.00362251	0.00481
510962.11	4276476.57	0.00429062	0.00483518	0.00364644	0.00484
510962.54	4276462.34	0.00420327	0.00465461	0.00350937	0.00465
511001.78	4276503.3	0.00480523	0.00297184	0.00221469	0.00481
510995.74	4276530.46	0.00496118	0.00335341	0.00250468	0.00496
511026.57	4276504.16	0.00510276	0.00254928	0.00188779	0.00510
511041.44	4276504.59	0.00534769	0.00241371	0.00178109	0.00535
511034.33	4276471.61	0.00494139	0.00232185	0.00171578	0.00494
511029.15	4276461.26	0.0047845	0.0023213	0.00171728	0.00478
511013.2	4276427.63	0.00437741	0.00236125	0.00175282	0.00438
511012.5	4276387.62	0.00412572	0.00218028	0.00161746	0.00413
511077.94	4276401.42	0.00502979	0.00184162	0.00134732	0.00503
511037.26	4276343.4	0.0040907	0.00175766	0.00129458	0.00409
511102.71	4276389.03	0.00524146	0.00179029	0.00130547	0.00524
511104.83	4276341.98	0.00483553	0.00165069	0.00120364	0.00484
511099.17	4276325	0.0046198	0.00160072	0.00116805	0.00462
511149.05	4276347.29	0.00536208	0.00172294	0.00125247	0.00536
511175.94	4276353.3	0.00571993	0.00179372	0.00130224	0.00572
511200.71	4276325.35	0.00570429	0.00176058	0.00127708	0.00570
511144.81	4276305.9	0.00494166	0.00159969	0.00116333	0.00494
511132.43	4276291.39	0.00468521	0.00154478	0.00112445	0.00469
511089.62	4276270.16	0.00406829	0.00145056	0.00105992	0.00407
511056.01	4276256.72	0.00370927	0.00142528	0.00104498	0.00371
511114.38	4276223.11	0.00399216	0.00135747	0.00098964	0.00399
511056.01	4276193.39	0.00338768	0.00125363	0.00091759	0.00339
511065.21	4276110.96	0.00310205	0.00107159	0.00078183	0.00310
511120.4	4276103.53	0.00338754	0.00112087	0.00081603	0.00339
511146.58	4276086.91	0.00346185	0.00112216	0.00081611	0.00346
511054.6	4276057.54	0.00285719	0.00096271	0.00070153	0.00286
511079.71	4276059.31	0.0029908	0.00099712	0.00072622	0.00299
511063.79	4276032.07	0.00281967	0.00093499	0.00068078	0.00282
511091.03	4276029.59	0.00294514	0.00096562	0.00070268	0.00295
511112.26	4276047.99	0.00311837	0.00101863	0.00074111	0.00312
511148.35	4276034.55	0.00325294	0.00104196	0.00075731	0.00325
511187.26	4276047.99	0.00351983	0.00111117	0.000807	0.00352
511099.18	4276852.79	0.01533601	0.00535459	0.0039087	0.01534
511091.4	4276809.98	0.01278492	0.00463703	0.00339097	0.01278
511126.42	4276783.8	0.01367979	0.00447113	0.00325311	0.01368
511155.44	4276841.83	0.01869589	0.0057382	0.00416107	0.01870
511197.19	4276843.95	0.02131238	0.00629003	0.00455122	0.02131
511240	4276846.07	0.0232288	0.00671544	0.00485323	0.02323
511290.59	4276850.67	0.02443896	0.00698473	0.00504443	0.02444
511322.08	4276852.44	0.02464257	0.00701253	0.00506321	0.02464
511271.92	4276788.58	0.01980629	0.00571126	0.00412689	0.01981
511269.62	4276751.13	0.01761322	0.00510047	0.00368645	0.01761
511286.9	4276724.63	0.01663603	0.00480651	0.00347352	0.01664
511322.05	4276714.26	0.01666279	0.00478285	0.0034551	0.01666
511347.4	4276753.44	0.01867605	0.00532826	0.00384771	0.01868
511324.93	4276787.43	0.02038922	0.00582245	0.00420481	0.02039
511395.79	4276750.56	0.01845942	0.00524293	0.00378508	0.01846
511433.82	4276788.58	0.01972058	0.00558209	0.00402911	0.01972
511474.15	4276802.99	0.01948121	0.00550668	0.00397435	0.01948
511455.71	4276828.34	0.02097459	0.00592848	0.00427877	0.02097
511396.49	4276844.26	0.02316621	0.00655714	0.00473289	0.02317
511369.02	4276870.9	0.02539702	0.00719253	0.00519168	0.02540

511333.22	4276911.69	0.02928307	0.00829995	0.00599133	0.02928
511305.33	4276950.31	0.03370691	0.0095619	0.00690262	0.03371
511416.46	4276868.95	0.02406259	0.00680167	0.00490899	0.02406
511406.83	4276881.28	0.02506256	0.00708427	0.00511295	0.02506
511400.52	4276896.01	0.02617074	0.00739644	0.00533821	0.02617
511389.39	4276913.76	0.02774722	0.00784145	0.00565936	0.02775
511368.34	4276928.8	0.02965821	0.0083848	0.00605165	0.02966
511356.31	4276946.84	0.03162092	0.00894054	0.00645279	0.03162
511350.29	4276960.98	0.03315412	0.00937371	0.00676542	0.03315
511337.96	4276975.41	0.03513496	0.00993691	0.00717204	0.03513
511320.22	4276989.55	0.03753353	0.01062361	0.00766803	0.03753
511421.25	4276982.31	0.03101876	0.00875233	0.00631617	0.03102
511435.82	4276972.74	0.02944271	0.00830791	0.00599547	0.02944
511407.51	4276951.92	0.02962615	0.00836343	0.0060357	0.02963
511416.67	4276936.52	0.02811879	0.00793855	0.0057291	0.02812
511441.65	4276961.5	0.02837686	0.00800778	0.0057789	0.02838
511428.75	4276926.11	0.02689261	0.00759232	0.00547923	0.02689
511451.64	4276947.34	0.02697517	0.00761301	0.00549405	0.02698
511435.82	4276912.79	0.02579183	0.0072824	0.0052556	0.02579
511462.88	4276936.52	0.02578863	0.00727872	0.00525282	0.02579
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510940.61	4276686.09	0.00559492	0.00448176	0.00336012	0.00559
510936.99	4276669.16	0.00538747	0.00440119	0.00330102	0.00539
510931.47	4276639.48	0.00505991	0.00434994	0.00326582	0.00506
510924.06	4276619.89	0.00479352	0.00395577	0.00296753	0.00479
510637	4276777.21	0.00231657	0.00071661	0.00051988	0.00232
510548.73	4276774.18	0.00182553	0.00055272	0.0004005	0.00183
510547.21	4276898.28	0.00161805	0.00049588	0.00035956	0.00162
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510650.62	4277053.14	0.00196958	0.0006237	0.00045304	0.00197
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510551.75	4277065.75	0.0012785	0.00040636	0.00029523	0.00128
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510585.34	4277602.27	0.00252836	0.00074304	0.0005375	0.00253
510520.14	4277627.4	0.00205031	0.00060531	0.00043798	0.00205
510477.07	4277653.12	0.00189906	0.00056081	0.0004058	0.00190
510525.39	4277547.1	0.00169133	0.00050815	0.00036805	0.00169
510511.13	4277494.37	0.00142277	0.00043412	0.0003147	0.00142
510485.63	4277496.53	0.00132667	0.00040536	0.00029387	0.00133
510439.39	4277515.55	0.00124178	0.00037826	0.00027419	0.00124
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510394.07	4277635.94	0.00150469	0.00044827	0.00032453	0.00150
510368.35	4277565.04	0.00125616	0.00037852	0.0002742	0.00126
510301.12	4277596.64	0.00113295	0.0003408	0.00024686	0.00113
510299.29	4277636.31	0.00117461	0.0003522	0.00025507	0.00117
510267.33	4277553.29	0.00100587	0.00030363	0.00021997	0.00101
510193.12	4277549.61	0.00087182	0.00026257	0.0001902	0.00087
510147.56	4277487.9	0.00079648	0.00023934	0.00017335	0.00080
510241.24	4277332.5	0.00076082	0.00023305	0.00016898	0.00076
510316.19	4277344.99	0.00088632	0.00027276	0.00019782	0.00089
510275.41	4277252.05	0.00073061	0.00022598	0.00016394	0.00073
510322.06	4277228.54	0.00076855	0.00023927	0.00017364	0.00077
510168.14	4277155.06	0.00058374	0.00018166	0.00013183	0.00058
510109.73	4277094.81	0.00049009	0.00015298	0.00011104	0.00049
510170.34	4277081.59	0.00053934	0.00016887	0.00012259	0.00054
510264.36	4276914.24	0.00069327	0.00021312	0.00015456	0.00069
510199.1	4276903.44	0.00059636	0.00018284	0.00013258	0.00060
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510201.26	4276808.79	0.00065198	0.00019659	0.00014241	0.00065
510259.18	4276827.37	0.00074396	0.00022483	0.0001629	0.00074
510308.02	4276868.86	0.00081546	0.00024843	0.00018007	0.00082
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510353.4	4276998.95	0.00081048	0.00025219	0.00018301	0.00081
510358.58	4276903.01	0.00091155	0.00027961	0.00020275	0.00091

510463.34	4276900.64	0.00126334	0.00038591	0.00027977	0.00126
510416.09	4276851.59	0.0011542	0.00035026	0.00025383	0.00115
510411.3	4276825.86	0.00116787	0.00035286	0.00025565	0.00117
510422.67	4276746.9	0.00129489	0.00038619	0.0002796	0.00129
510452.36	4276669.61	0.00143688	0.0004257	0.00030809	0.00144
510518.97	4276678.76	0.00166823	0.00049939	0.00036163	0.00167
510563.21	4276656.9	0.00180766	0.00054589	0.0003955	0.00181
510600.33	4276627.41	0.00191129	0.00058279	0.00042246	0.00191
510571.86	4276593.85	0.00175193	0.00052898	0.00038324	0.00175
510522.02	4276624.36	0.00162948	0.00048678	0.00035246	0.00163
510525.92	4276534.3	0.00153024	0.00045689	0.00033081	0.00153
510468.25	4276503.81	0.00136134	0.00040305	0.00029169	0.00136
510476.7	4276581.69	0.00146067	0.00043252	0.00031302	0.00146
510425.26	4276527.32	0.00130092	0.00038283	0.00027696	0.00130
510398.44	4276557.45	0.00126497	0.00037116	0.00026847	0.00126
510371.12	4276602	0.0012069	0.00035386	0.00025594	0.00121
510328.51	4276635.8	0.00108119	0.00031737	0.00022957	0.00108
510339.9	4276656.37	0.00109882	0.0003232	0.00023381	0.00110
510329.33	4276697.73	0.00103597	0.00030617	0.00022155	0.00104
511060.04	4278365.13	0.01226079	0.00356403	0.00257653	0.01226
511053.55	4278281.17	0.01466252	0.00420154	0.00303485	0.01466
511449.69	4278012.31	0.0264386	0.00895819	0.00652967	0.02644
511463.6	4278021.57	0.02438088	0.00805423	0.0058633	0.02438
511584.5	4278030.79	0.01529207	0.00462725	0.00335282	0.01529
511579.17	4278016.57	0.01609132	0.00487216	0.00353041	0.01609
511643.38	4278010.53	0.01319053	0.00392551	0.00284169	0.01319
511658.54	4277976.09	0.01334415	0.00395372	0.0028614	0.01334
511473.56	4278066.24	0.0205438	0.00669786	0.00487261	0.02054
510844.05	4276334.61	0.00270192	0.0010302	0.00075506	0.00270
510819	4276360.66	0.00264268	0.00095181	0.00069581	0.00264
510812.25	4276338.82	0.00255173	0.00089023	0.00064982	0.00255
510766.27	4276358.28	0.00236393	0.00077484	0.00056384	0.00236
510788.08	4276480.9	0.00277883	0.00099067	0.00072388	0.00278
510862.95	4276608.23	0.0039606	0.00178399	0.00131631	0.00396
510849.39	4276591.14	0.00374046	0.0015987	0.00117726	0.00374
510838.19	4276539.85	0.00339474	0.00143265	0.00105446	0.00339

* AERMOD (18081): C:\Users\kjohnson\Desktop\NEAP HRA\NorthEntry\NorthEntry.isc 08/24/18
 * AERMET (14134): 08:25:30
 * MODELING OPTIONS USED: RegDEFAULT CONC ELEV URBAN
 * PLOT FILE OF ANNUAL VALUES AVERAGED ACROSS 5 YEARS FOR SOURCE GROUP: AREA
 * FOR A TOTAL OF 233 RECEPTORS.
 * FORMAT: (3(1X,F13.5),3(1X,F8.2),2X,A6,2X,A8,2X,I8.8,2X,A8)
 * X Y AVERAGE CONC ZELEV ZHILL ZFLAG AVE GRP NUM YRS NET ID
 *

511141.17000	4277077.82000	143983.88598	54.06	54.06	0.00	ANNUAL	AREA	00000005
511177.30000	4277063.56000	136457.44347	55.65	55.65	0.00	ANNUAL	AREA	00000005
511115.23000	4277044.70000	103975.22786	51.42	51.42	0.00	ANNUAL	AREA	00000005
511127.93000	4277027.53000	97231.93682	51.84	51.84	0.00	ANNUAL	AREA	00000005
511112.48000	4276990.10000	72604.83919	50.03	50.03	0.00	ANNUAL	AREA	00000005
511152.66000	4277006.58000	93009.69074	53.54	53.54	0.00	ANNUAL	AREA	00000005
511185.29000	4276993.19000	92931.53969	55.44	55.44	0.00	ANNUAL	AREA	00000005
511245.73000	4277021.01000	107435.16197	57.07	57.07	0.00	ANNUAL	AREA	00000005
511278.70000	4277033.03000	108845.39835	57.52	57.52	0.00	ANNUAL	AREA	00000005
511308.58000	4277036.12000	105295.81185	57.93	57.93	0.00	ANNUAL	AREA	00000005
511319.91000	4277044.70000	106378.17681	58.09	58.09	0.00	ANNUAL	AREA	00000005
511336.05000	4277053.98000	106408.45882	58.31	58.31	0.00	ANNUAL	AREA	00000005
511350.30000	4277017.64000	92493.80929	58.57	58.57	0.00	ANNUAL	AREA	00000005
511371.36000	4277040.35000	94945.63707	58.80	58.80	0.00	ANNUAL	AREA	00000005
511359.18000	4277004.82000	87778.85979	58.87	58.87	0.00	ANNUAL	AREA	00000005
511380.24000	4277027.53000	89879.00693	58.92	58.92	0.00	ANNUAL	AREA	00000005
511370.17000	4276993.10000	83365.94118	59.15	59.15	0.00	ANNUAL	AREA	00000005
511391.78000	4277015.07000	84842.81570	59.07	59.07	0.00	ANNUAL	AREA	00000005
511417.05000	4277042.36000	85822.77667	59.00	59.00	0.00	ANNUAL	AREA	00000005
511377.68000	4276982.47000	79967.90391	59.35	59.35	0.00	ANNUAL	AREA	00000005
511400.94000	4277005.00000	81099.08236	59.18	59.18	0.00	ANNUAL	AREA	00000005
511412.84000	4276995.66000	77289.28017	59.28	59.28	0.00	ANNUAL	AREA	00000005
511437.57000	4277020.75000	77445.41324	59.01	59.01	0.00	ANNUAL	AREA	00000005
511426.67000	4277032.47000	81781.97923	59.00	59.00	0.00	ANNUAL	AREA	00000005
511447.91000	4277011.04000	73902.85569	59.11	59.11	0.00	ANNUAL	AREA	00000005
511458.35000	4276998.96000	70224.72977	59.24	59.24	0.00	ANNUAL	AREA	00000005
511467.33000	4276989.25000	67391.86781	59.43	59.43	0.00	ANNUAL	AREA	00000005
511477.22000	4276977.16000	64273.83517	59.61	59.61	0.00	ANNUAL	AREA	00000005
511488.57000	4276969.65000	61680.44219	59.74	59.74	0.00	ANNUAL	AREA	00000005
511498.09000	4276955.18000	58721.04041	59.87	59.87	0.00	ANNUAL	AREA	00000005
511388.39000	4276972.03000	76385.13500	59.53	59.53	0.00	ANNUAL	AREA	00000005
511399.38000	4276962.14000	73074.91722	59.64	59.64	0.00	ANNUAL	AREA	00000005
511400.53000	4278315.27000	31520.27527	60.00	60.00	0.00	ANNUAL	AREA	00000005
511340.62000	4278311.18000	34958.62770	60.00	60.00	0.00	ANNUAL	AREA	00000005
511345.14000	4278296.52000	35942.99635	60.00	60.00	0.00	ANNUAL	AREA	00000005
511364.54000	4278312.47000	33720.90116	60.00	60.00	0.00	ANNUAL	AREA	00000005
511209.12000	4276947.27000	78040.32853	57.11	57.11	0.00	ANNUAL	AREA	00000005
511176.13000	4276927.62000	66485.68848	54.64	54.64	0.00	ANNUAL	AREA	00000005
511219.65000	4276925.86000	72609.36368	58.24	58.24	0.00	ANNUAL	AREA	00000005
511196.49000	4276892.17000	60574.16495	56.79	56.79	0.00	ANNUAL	AREA	00000005
511003.40000	4276731.86000	17485.25777	48.03	48.03	0.00	ANNUAL	AREA	00000005
510998.10000	4276717.84000	16641.23692	48.10	48.10	0.00	ANNUAL	AREA	00000005
511028.47000	4276724.85000	18832.09233	48.08	48.08	0.00	ANNUAL	AREA	00000005
511051.99000	4276724.69000	20504.85085	48.47	48.47	0.00	ANNUAL	AREA	00000005
511131.57000	4276736.84000	28773.53077	54.06	60.00	0.00	ANNUAL	AREA	00000005
511001.84000	4276671.43000	15298.95685	48.24	48.24	0.00	ANNUAL	AREA	00000005
511001.84000	4276650.09000	14660.14888	48.30	48.30	0.00	ANNUAL	AREA	00000005
511020.22000	4276632.96000	14965.76141	48.04	48.04	0.00	ANNUAL	AREA	00000005
511038.75000	4276665.82000	17128.83818	49.03	49.03	0.00	ANNUAL	AREA	00000005
511039.53000	4276636.23000	16131.45345	49.32	49.32	0.00	ANNUAL	AREA	00000005
511082.20000	4276682.64000	20780.84991	51.17	51.17	0.00	ANNUAL	AREA	00000005
511107.74000	4276673.92000	22370.66526	53.68	53.68	0.00	ANNUAL	AREA	00000005
511082.67000	4276634.05000	18746.68195	53.01	53.01	0.00	ANNUAL	AREA	00000005
511110.54000	4276628.29000	20320.80244	55.36	55.36	0.00	ANNUAL	AREA	00000005
511127.99000	4276630.94000	21621.53405	56.73	56.73	0.00	ANNUAL	AREA	00000005
511125.03000	4276675.95000	23930.36538	55.39	55.39	0.00	ANNUAL	AREA	00000005
511144.81000	4276679.06000	25818.26761	57.40	57.40	0.00	ANNUAL	AREA	00000005
511150.72000	4276637.95000	23579.15768	58.53	58.53	0.00	ANNUAL	AREA	00000005
511169.10000	4276687.47000	28507.89733	60.00	60.00	0.00	ANNUAL	AREA	00000005
511171.75000	4276641.37000	25220.86774	60.00	60.00	0.00	ANNUAL	AREA	00000005
510972.24000	4276568.62000	11568.08874	48.08	48.08	0.00	ANNUAL	AREA	00000005
510970.09000	4276558.27000	11298.68078	48.00	48.00	0.00	ANNUAL	AREA	00000005
510968.79000	4276547.92000	11077.35090	48.09	48.09	0.00	ANNUAL	AREA	00000005
510965.99000	4276537.57000	10821.04958	48.18	48.18	0.00	ANNUAL	AREA	00000005
510988.84000	4276570.99000	12157.67891	48.07	48.07	0.00	ANNUAL	AREA	00000005
510985.39000	4276561.72000	11847.34955	48.02	48.02	0.00	ANNUAL	AREA	00000005

511025.27000	4276572.93000	13512.50050	48.12	48.12	0.00	ANNUAL	AREA	00000005
511039.72000	4276569.26000	14102.82200	49.49	49.49	0.00	ANNUAL	AREA	00000005
511021.39000	4276549.00000	12778.73034	48.00	48.00	0.00	ANNUAL	AREA	00000005
511014.50000	4276530.03000	12131.16781	48.04	48.04	0.00	ANNUAL	AREA	00000005
511041.66000	4276545.12000	13560.36389	49.73	49.73	0.00	ANNUAL	AREA	00000005
511034.33000	4276536.50000	13022.60854	49.02	49.02	0.00	ANNUAL	AREA	00000005
510959.53000	4276510.20000	10217.44197	48.46	48.46	0.00	ANNUAL	AREA	00000005
510971.81000	4276510.84000	10541.47934	48.37	48.37	0.00	ANNUAL	AREA	00000005
510964.91000	4276497.69000	10163.24282	48.54	48.54	0.00	ANNUAL	AREA	00000005
510962.11000	4276476.57000	9790.88103	48.76	48.76	0.00	ANNUAL	AREA	00000005
510962.54000	4276462.34000	9600.26695	48.83	48.83	0.00	ANNUAL	AREA	00000005
511001.78000	4276503.30000	11224.75587	48.18	48.18	0.00	ANNUAL	AREA	00000005
510995.74000	4276530.46000	11558.75287	48.12	48.12	0.00	ANNUAL	AREA	00000005
511026.57000	4276504.16000	11984.21700	48.26	48.26	0.00	ANNUAL	AREA	00000005
511041.44000	4276504.59000	12586.84033	49.81	49.81	0.00	ANNUAL	AREA	00000005
511034.33000	4276471.61000	11620.82701	49.11	56.00	0.00	ANNUAL	AREA	00000005
511029.15000	4276461.26000	11244.09167	48.66	60.00	0.00	ANNUAL	AREA	00000005
511013.20000	4276427.63000	10262.13952	48.79	60.00	0.00	ANNUAL	AREA	00000005
511012.50000	4276387.62000	9676.90458	49.44	60.00	0.00	ANNUAL	AREA	00000005
511077.94000	4276401.42000	11884.14304	56.35	60.00	0.00	ANNUAL	AREA	00000005
511037.26000	4276343.40000	9637.69105	50.72	60.00	0.00	ANNUAL	AREA	00000005
511102.71000	4276389.03000	12397.95028	59.39	59.39	0.00	ANNUAL	AREA	00000005
511104.83000	4276341.98000	11437.87769	57.26	57.26	0.00	ANNUAL	AREA	00000005
511099.17000	4276325.00000	10925.08253	55.42	55.42	0.00	ANNUAL	AREA	00000005
511149.05000	4276347.29000	12694.79532	59.28	59.28	0.00	ANNUAL	AREA	00000005
511175.94000	4276353.30000	13546.70775	60.00	60.00	0.00	ANNUAL	AREA	00000005
511200.71000	4276325.35000	13512.67035	60.00	60.00	0.00	ANNUAL	AREA	00000005
511144.81000	4276305.90000	11698.19309	57.76	57.76	0.00	ANNUAL	AREA	00000005
511132.43000	4276291.39000	11088.12270	55.91	60.00	0.00	ANNUAL	AREA	00000005
511089.62000	4276270.16000	9616.49427	50.38	60.00	0.00	ANNUAL	AREA	00000005
511056.01000	4276256.72000	8756.95504	48.96	48.96	0.00	ANNUAL	AREA	00000005
511114.38000	4276223.11000	9443.54656	50.82	60.00	0.00	ANNUAL	AREA	00000005
511056.01000	4276193.39000	8002.83273	48.07	48.07	0.00	ANNUAL	AREA	00000005
511065.21000	4276110.96000	7336.19912	48.00	48.00	0.00	ANNUAL	AREA	00000005
511120.40000	4276103.53000	8016.59744	48.15	48.15	0.00	ANNUAL	AREA	00000005
511146.58000	4276086.91000	8194.94708	48.00	48.00	0.00	ANNUAL	AREA	00000005
511054.60000	4276057.54000	6759.70200	48.00	48.00	0.00	ANNUAL	AREA	00000005
511079.71000	4276059.31000	7076.92219	48.00	48.00	0.00	ANNUAL	AREA	00000005
511063.79000	4276032.07000	6672.52543	48.00	48.00	0.00	ANNUAL	AREA	00000005
511091.03000	4276029.59000	6970.60315	48.00	48.00	0.00	ANNUAL	AREA	00000005
511112.26000	4276047.99000	7381.01889	48.00	48.00	0.00	ANNUAL	AREA	00000005
511148.35000	4276034.55000	7701.73467	48.00	48.00	0.00	ANNUAL	AREA	00000005
511187.26000	4276047.99000	8335.34946	48.46	48.46	0.00	ANNUAL	AREA	00000005
511099.18000	4276852.79000	36262.85763	48.32	56.00	0.00	ANNUAL	AREA	00000005
511091.40000	4276809.98000	30212.26254	48.05	60.00	0.00	ANNUAL	AREA	00000005
511126.42000	4276783.80000	32379.06108	52.27	60.00	0.00	ANNUAL	AREA	00000005
511155.44000	4276841.83000	44291.37477	54.44	56.00	0.00	ANNUAL	AREA	00000005
511197.19000	4276843.95000	50516.63040	57.47	57.47	0.00	ANNUAL	AREA	00000005
511240.00000	4276846.07000	55074.02289	59.93	59.93	0.00	ANNUAL	AREA	00000005
511290.59000	4276850.67000	57951.78709	60.00	60.00	0.00	ANNUAL	AREA	00000005
511322.08000	4276852.44000	58437.83147	60.10	60.10	0.00	ANNUAL	AREA	00000005
511271.92000	4276788.58000	46961.03863	59.70	59.70	0.00	ANNUAL	AREA	00000005
511269.62000	4276751.13000	41758.93740	59.44	59.44	0.00	ANNUAL	AREA	00000005
511286.90000	4276724.63000	39443.29841	59.70	59.70	0.00	ANNUAL	AREA	00000005
511322.05000	4276714.26000	39510.06711	60.15	60.15	0.00	ANNUAL	AREA	00000005
511347.40000	4276753.44000	44287.26460	60.46	60.46	0.00	ANNUAL	AREA	00000005
511324.93000	4276787.43000	48349.21767	60.15	60.15	0.00	ANNUAL	AREA	00000005
511395.79000	4276750.56000	43776.07910	61.11	61.11	0.00	ANNUAL	AREA	00000005
511433.82000	4276788.58000	46768.90838	61.02	61.02	0.00	ANNUAL	AREA	00000005
511474.15000	4276802.99000	46202.02955	60.57	60.57	0.00	ANNUAL	AREA	00000005
511455.71000	4276828.34000	49743.80343	60.21	60.21	0.00	ANNUAL	AREA	00000005
511396.49000	4276844.26000	54940.50464	60.79	60.79	0.00	ANNUAL	AREA	00000005
511369.02000	4276870.90000	60230.65168	60.48	60.48	0.00	ANNUAL	AREA	00000005
511333.22000	4276911.69000	69445.91728	60.05	60.05	0.00	ANNUAL	AREA	00000005
511305.33000	4276950.31000	79936.36107	59.51	59.51	0.00	ANNUAL	AREA	00000005
511416.46000	4276868.95000	57067.31961	60.38	60.38	0.00	ANNUAL	AREA	00000005
511406.83000	4276881.28000	59438.88312	60.37	60.37	0.00	ANNUAL	AREA	00000005
511400.52000	4276896.01000	62067.17134	60.28	60.28	0.00	ANNUAL	AREA	00000005
511389.39000	4276913.76000	65806.04860	60.16	60.16	0.00	ANNUAL	AREA	00000005
511368.34000	4276928.80000	70337.87165	60.00	60.00	0.00	ANNUAL	AREA	00000005
511356.31000	4276946.84000	74992.56611	59.72	59.72	0.00	ANNUAL	AREA	00000005
511350.29000	4276960.98000	78628.75225	59.48	59.48	0.00	ANNUAL	AREA	00000005
511337.96000	4276975.41000	83326.19908	59.16	59.16	0.00	ANNUAL	AREA	00000005
511320.22000	4276989.55000	89013.77494	58.75	58.75	0.00	ANNUAL	AREA	00000005

511421.25000	4276982.31000	73566.38264	59.42	59.42	0.00	ANNUAL	AREA	00000005
511435.82000	4276972.74000	69828.47887	59.53	59.53	0.00	ANNUAL	AREA	00000005
511407.51000	4276951.92000	70263.14317	59.75	59.75	0.00	ANNUAL	AREA	00000005
511416.67000	4276936.52000	66688.12985	59.92	59.92	0.00	ANNUAL	AREA	00000005
511441.65000	4276961.50000	67300.57186	59.65	59.65	0.00	ANNUAL	AREA	00000005
511428.75000	4276926.11000	63780.05615	60.01	60.01	0.00	ANNUAL	AREA	00000005
511451.64000	4276947.34000	63976.13413	59.80	59.80	0.00	ANNUAL	AREA	00000005
511435.82000	4276912.79000	61169.27702	60.05	60.05	0.00	ANNUAL	AREA	00000005
511462.88000	4276936.52000	61162.00434	59.92	59.92	0.00	ANNUAL	AREA	00000005
510943.27000	4276699.02000	13351.04988	48.87	48.87	0.00	ANNUAL	AREA	00000005
510940.61000	4276686.09000	12960.89336	49.08	49.08	0.00	ANNUAL	AREA	00000005
510936.99000	4276669.16000	12471.22397	49.32	49.32	0.00	ANNUAL	AREA	00000005
510931.47000	4276639.48000	11689.99772	49.43	49.43	0.00	ANNUAL	AREA	00000005
510924.06000	4276619.89000	11092.08773	49.42	49.42	0.00	ANNUAL	AREA	00000005
510637.00000	4276777.21000	5487.45234	61.78	61.78	0.00	ANNUAL	AREA	00000005
510548.73000	4276774.18000	4325.56139	60.83	60.83	0.00	ANNUAL	AREA	00000005
510547.21000	4276898.28000	3833.30663	68.09	68.09	0.00	ANNUAL	AREA	00000005
510551.25000	4276958.30000	3495.91041	71.63	71.63	0.00	ANNUAL	AREA	00000005
510650.62000	4277053.14000	4663.98875	71.89	71.89	0.00	ANNUAL	AREA	00000005
510672.82000	4277035.48000	5327.69243	70.77	70.77	0.00	ANNUAL	AREA	00000005
510685.93000	4277000.17000	5983.20032	68.82	68.82	0.00	ANNUAL	AREA	00000005
510709.64000	4277123.25000	5616.96955	73.11	73.11	0.00	ANNUAL	AREA	00000005
510551.75000	4277065.75000	3027.33643	73.00	73.00	0.00	ANNUAL	AREA	00000005
510585.55000	4277002.69000	3708.88336	72.97	72.97	0.00	ANNUAL	AREA	00000005
510681.05000	4277526.30000	8458.91216	89.78	97.00	0.00	ANNUAL	AREA	00000005
510602.09000	4277543.05000	5570.38245	95.78	95.78	0.00	ANNUAL	AREA	00000005
510585.34000	4277602.27000	5993.28689	96.17	96.17	0.00	ANNUAL	AREA	00000005
510520.14000	4277627.40000	4859.83037	90.50	90.50	0.00	ANNUAL	AREA	00000005
510477.07000	4277653.12000	4501.30653	84.70	97.00	0.00	ANNUAL	AREA	00000005
510525.39000	4277547.10000	4007.99742	93.30	93.30	0.00	ANNUAL	AREA	00000005
510511.13000	4277494.37000	3370.86426	90.21	90.21	0.00	ANNUAL	AREA	00000005
510485.63000	4277496.53000	3143.12102	88.33	88.33	0.00	ANNUAL	AREA	00000005
510439.39000	4277515.55000	2942.12862	84.61	84.61	0.00	ANNUAL	AREA	00000005
510369.82000	4277592.96000	3148.59362	75.40	94.00	0.00	ANNUAL	AREA	00000005
510394.07000	4277635.94000	3566.11259	76.79	97.00	0.00	ANNUAL	AREA	00000005
510368.35000	4277565.04000	2976.63620	75.93	94.00	0.00	ANNUAL	AREA	00000005
510301.12000	4277596.64000	2684.75479	73.12	73.12	0.00	ANNUAL	AREA	00000005
510299.29000	4277636.31000	2783.57809	73.03	73.03	0.00	ANNUAL	AREA	00000005
510267.33000	4277553.29000	2383.50074	73.00	73.00	0.00	ANNUAL	AREA	00000005
510193.12000	4277549.61000	2065.91374	72.88	72.88	0.00	ANNUAL	AREA	00000005
510147.56000	4277487.90000	1887.42818	71.93	71.93	0.00	ANNUAL	AREA	00000005
510241.24000	4277332.50000	1802.46312	72.62	72.62	0.00	ANNUAL	AREA	00000005
510316.19000	4277344.99000	2099.65775	72.62	72.62	0.00	ANNUAL	AREA	00000005
510275.41000	4277252.05000	1730.65847	72.40	72.40	0.00	ANNUAL	AREA	00000005
510322.06000	4277228.54000	1820.37048	72.91	72.91	0.00	ANNUAL	AREA	00000005
510168.14000	4277155.06000	1382.63194	60.88	69.00	0.00	ANNUAL	AREA	00000005
510109.73000	4277094.81000	1160.76440	60.00	60.00	0.00	ANNUAL	AREA	00000005
510170.34000	4277081.59000	1277.35556	60.00	60.00	0.00	ANNUAL	AREA	00000005
510264.36000	4276914.24000	1642.34489	60.00	60.00	0.00	ANNUAL	AREA	00000005
510199.10000	4276903.44000	1412.82770	60.00	60.00	0.00	ANNUAL	AREA	00000005
510157.61000	4276829.53000	1364.63298	60.00	60.00	0.00	ANNUAL	AREA	00000005
510201.26000	4276808.79000	1544.93274	60.00	60.00	0.00	ANNUAL	AREA	00000005
510259.18000	4276827.37000	1762.85488	60.00	60.00	0.00	ANNUAL	AREA	00000005
510308.02000	4276868.86000	1932.04903	60.00	60.00	0.00	ANNUAL	AREA	00000005
510330.92000	4276810.08000	2201.42828	60.00	60.00	0.00	ANNUAL	AREA	00000005
510353.40000	4276998.95000	1919.70339	63.90	63.90	0.00	ANNUAL	AREA	00000005
510358.58000	4276903.01000	2159.52471	60.00	60.00	0.00	ANNUAL	AREA	00000005
510463.34000	4276900.64000	2993.10559	63.97	63.97	0.00	ANNUAL	AREA	00000005
510416.09000	4276851.59000	2734.77156	60.45	60.45	0.00	ANNUAL	AREA	00000005
510411.30000	4276825.86000	2767.32005	60.00	60.00	0.00	ANNUAL	AREA	00000005
510422.67000	4276746.90000	3068.83588	60.00	60.00	0.00	ANNUAL	AREA	00000005
510452.36000	4276669.61000	3405.66723	60.00	60.00	0.00	ANNUAL	AREA	00000005
510518.97000	4276678.76000	3953.44812	60.00	60.00	0.00	ANNUAL	AREA	00000005
510563.21000	4276656.90000	4283.36440	60.00	60.00	0.00	ANNUAL	AREA	00000005
510600.33000	4276627.41000	4528.32532	59.75	59.75	0.00	ANNUAL	AREA	00000005
510571.86000	4276593.85000	4151.32453	59.39	59.39	0.00	ANNUAL	AREA	00000005
510522.02000	4276624.36000	3861.71613	59.72	59.72	0.00	ANNUAL	AREA	00000005
510525.92000	4276534.30000	3626.57068	58.46	58.46	0.00	ANNUAL	AREA	00000005
510468.25000	4276503.81000	3226.64137	58.61	58.61	0.00	ANNUAL	AREA	00000005
510476.70000	4276581.69000	3462.07091	59.26	59.26	0.00	ANNUAL	AREA	00000005
510425.26000	4276527.32000	3083.68660	59.26	59.26	0.00	ANNUAL	AREA	00000005
510398.44000	4276557.45000	2998.58666	59.63	59.63	0.00	ANNUAL	AREA	00000005
510371.12000	4276602.00000	2860.96766	60.00	60.00	0.00	ANNUAL	AREA	00000005
510328.51000	4276635.80000	2562.91957	60.00	60.00	0.00	ANNUAL	AREA	00000005

510339.90000	4276656.37000	2604.64870	60.00	60.00	0.00	ANNUAL	AREA	00000005
510329.33000	4276697.73000	2455.50389	60.00	60.00	0.00	ANNUAL	AREA	00000005
511060.04000	4278365.13000	29067.49579	60.00	60.00	0.00	ANNUAL	AREA	00000005
511053.55000	4278281.17000	34767.87400	60.00	60.00	0.00	ANNUAL	AREA	00000005
511449.69000	4278012.31000	62544.56303	60.00	60.00	0.00	ANNUAL	AREA	00000005
511463.60000	4278021.57000	57698.67544	60.00	60.00	0.00	ANNUAL	AREA	00000005
511584.50000	4278030.79000	36234.62211	60.00	60.00	0.00	ANNUAL	AREA	00000005
511579.17000	4278016.57000	38128.10665	60.00	60.00	0.00	ANNUAL	AREA	00000005
511643.38000	4278010.53000	31261.99102	60.00	60.00	0.00	ANNUAL	AREA	00000005
511658.54000	4277976.09000	31627.94700	60.00	60.00	0.00	ANNUAL	AREA	00000005
511473.56000	4278066.24000	48627.45109	60.00	60.00	0.00	ANNUAL	AREA	00000005
510844.05000	4276334.61000	6379.61927	48.00	48.00	0.00	ANNUAL	AREA	00000005
510819.00000	4276360.66000	6245.67991	48.00	48.00	0.00	ANNUAL	AREA	00000005
510812.25000	4276338.82000	6033.78023	48.00	48.00	0.00	ANNUAL	AREA	00000005
510766.27000	4276358.28000	5595.00914	48.56	48.56	0.00	ANNUAL	AREA	00000005
510788.08000	4276480.90000	6568.54062	49.84	49.84	0.00	ANNUAL	AREA	00000005
510862.95000	4276608.23000	9322.43366	51.92	60.00	0.00	ANNUAL	AREA	00000005
510849.39000	4276591.14000	8813.43259	52.45	60.00	0.00	ANNUAL	AREA	00000005
510838.19000	4276539.85000	8000.76510	51.04	51.04	0.00	ANNUAL	AREA	00000005

** CONCUNIT ug/m^3

** DEPUNIT g/m^2

* AERMOD (18081): C:\Users\kjohnson\Desktop\NEAP HRA\NorthEntry\NorthEntry.isc 08/24/18
 * AERMET (14134): 08:25:30
 * MODELING OPTIONS USED: RegDEFAULT CONC ELEV URBAN
 * PLOT FILE OF ANNUAL VALUES AVERAGED ACROSS 5 YEARS FOR SOURCE GROUP: LINEN
 * FOR A TOTAL OF 233 RECEPTORS.
 * FORMAT: (3(1X,F13.5),3(1X,F8.2),2X,A6,2X,A8,2X,I8.8,2X,A8)
 * X Y AVERAGE CONC ZELEV ZHILL ZFLAG AVE GRP NUM YRS NET ID
 *

511141.17000	4277077.82000	0.10570	54.06	54.06	0.00	ANNUAL	LINEN	00000005
511177.30000	4277063.56000	0.12313	55.65	55.65	0.00	ANNUAL	LINEN	00000005
511115.23000	4277044.70000	0.08728	51.42	51.42	0.00	ANNUAL	LINEN	00000005
511127.93000	4277027.53000	0.08936	51.84	51.84	0.00	ANNUAL	LINEN	00000005
511112.48000	4276990.10000	0.07821	50.03	50.03	0.00	ANNUAL	LINEN	00000005
511152.66000	4277006.58000	0.09637	53.54	53.54	0.00	ANNUAL	LINEN	00000005
511185.29000	4276993.19000	0.10786	55.44	55.44	0.00	ANNUAL	LINEN	00000005
511245.73000	4277021.01000	0.14969	57.07	57.07	0.00	ANNUAL	LINEN	00000005
511278.70000	4277033.03000	0.18097	57.52	57.52	0.00	ANNUAL	LINEN	00000005
511308.58000	4277036.12000	0.20876	57.93	57.93	0.00	ANNUAL	LINEN	00000005
511319.91000	4277044.70000	0.22776	58.09	58.09	0.00	ANNUAL	LINEN	00000005
511336.05000	4277053.98000	0.25484	58.31	58.31	0.00	ANNUAL	LINEN	00000005
511350.30000	4277017.64000	0.22730	58.57	58.57	0.00	ANNUAL	LINEN	00000005
511371.36000	4277040.35000	0.27084	58.80	58.80	0.00	ANNUAL	LINEN	00000005
511359.18000	4277004.82000	0.22212	58.87	58.87	0.00	ANNUAL	LINEN	00000005
511380.24000	4277027.53000	0.26205	58.92	58.92	0.00	ANNUAL	LINEN	00000005
511370.17000	4276993.10000	0.21948	59.15	59.15	0.00	ANNUAL	LINEN	00000005
511391.78000	4277015.07000	0.25569	59.07	59.07	0.00	ANNUAL	LINEN	00000005
511417.05000	4277042.36000	0.30058	59.00	59.00	0.00	ANNUAL	LINEN	00000005
511377.68000	4276982.47000	0.21522	59.35	59.35	0.00	ANNUAL	LINEN	00000005
511400.94000	4277005.00000	0.25031	59.18	59.18	0.00	ANNUAL	LINEN	00000005
511412.84000	4276995.66000	0.24678	59.28	59.28	0.00	ANNUAL	LINEN	00000005
511437.57000	4277020.75000	0.28104	59.01	59.01	0.00	ANNUAL	LINEN	00000005
511426.67000	4277032.47000	0.29152	59.00	59.00	0.00	ANNUAL	LINEN	00000005
511447.91000	4277011.04000	0.27302	59.11	59.11	0.00	ANNUAL	LINEN	00000005
511458.35000	4276998.96000	0.26299	59.24	59.24	0.00	ANNUAL	LINEN	00000005
511467.33000	4276989.25000	0.25546	59.43	59.43	0.00	ANNUAL	LINEN	00000005
511477.22000	4276977.16000	0.24638	59.61	59.61	0.00	ANNUAL	LINEN	00000005
511488.57000	4276969.65000	0.24158	59.74	59.74	0.00	ANNUAL	LINEN	00000005
511498.09000	4276955.18000	0.23157	59.87	59.87	0.00	ANNUAL	LINEN	00000005
511388.39000	4276972.03000	0.21301	59.53	59.53	0.00	ANNUAL	LINEN	00000005
511399.38000	4276962.14000	0.21101	59.64	59.64	0.00	ANNUAL	LINEN	00000005
511400.53000	4278315.27000	2.07337	60.00	60.00	0.00	ANNUAL	LINEN	00000005
511340.62000	4278311.18000	5.39671	60.00	60.00	0.00	ANNUAL	LINEN	00000005
511345.14000	4278296.52000	5.28159	60.00	60.00	0.00	ANNUAL	LINEN	00000005
511364.54000	4278312.47000	3.42120	60.00	60.00	0.00	ANNUAL	LINEN	00000005
511209.12000	4276947.27000	0.10628	57.11	57.11	0.00	ANNUAL	LINEN	00000005
511176.13000	4276927.62000	0.09037	54.64	54.64	0.00	ANNUAL	LINEN	00000005
511219.65000	4276925.86000	0.10489	58.24	58.24	0.00	ANNUAL	LINEN	00000005
511196.49000	4276892.17000	0.09036	56.79	56.79	0.00	ANNUAL	LINEN	00000005
511003.40000	4276731.86000	0.04183	48.03	48.03	0.00	ANNUAL	LINEN	00000005
510998.10000	4276717.84000	0.04082	48.10	48.10	0.00	ANNUAL	LINEN	00000005
511028.47000	4276724.85000	0.04393	48.08	48.08	0.00	ANNUAL	LINEN	00000005
511051.99000	4276724.69000	0.04636	48.47	48.47	0.00	ANNUAL	LINEN	00000005
511131.57000	4276736.84000	0.05827	54.06	60.00	0.00	ANNUAL	LINEN	00000005
511001.84000	4276671.43000	0.03941	48.24	48.24	0.00	ANNUAL	LINEN	00000005
511001.84000	4276650.09000	0.03862	48.30	48.30	0.00	ANNUAL	LINEN	00000005
511020.22000	4276632.96000	0.03930	48.04	48.04	0.00	ANNUAL	LINEN	00000005
511038.75000	4276665.82000	0.04241	49.03	49.03	0.00	ANNUAL	LINEN	00000005
511039.53000	4276636.23000	0.04126	49.32	49.32	0.00	ANNUAL	LINEN	00000005
511082.20000	4276682.64000	0.04799	51.17	51.17	0.00	ANNUAL	LINEN	00000005
511107.74000	4276673.92000	0.05082	53.68	53.68	0.00	ANNUAL	LINEN	00000005
511082.67000	4276634.05000	0.04586	53.01	53.01	0.00	ANNUAL	LINEN	00000005
511110.54000	4276628.29000	0.04863	55.36	55.36	0.00	ANNUAL	LINEN	00000005
511127.99000	4276630.94000	0.05063	56.73	56.73	0.00	ANNUAL	LINEN	00000005
511125.03000	4276675.95000	0.05318	55.39	55.39	0.00	ANNUAL	LINEN	00000005
511144.81000	4276679.06000	0.05587	57.40	57.40	0.00	ANNUAL	LINEN	00000005
511150.72000	4276637.95000	0.05340	58.53	58.53	0.00	ANNUAL	LINEN	00000005
511169.10000	4276687.47000	0.05940	60.00	60.00	0.00	ANNUAL	LINEN	00000005
511171.75000	4276641.37000	0.05566	60.00	60.00	0.00	ANNUAL	LINEN	00000005
510972.24000	4276568.62000	0.03388	48.08	48.08	0.00	ANNUAL	LINEN	00000005
510970.09000	4276558.27000	0.03343	48.00	48.00	0.00	ANNUAL	LINEN	00000005
510968.79000	4276547.92000	0.03307	48.09	48.09	0.00	ANNUAL	LINEN	00000005
510965.99000	4276537.57000	0.03263	48.18	48.18	0.00	ANNUAL	LINEN	00000005
510988.84000	4276570.99000	0.03494	48.07	48.07	0.00	ANNUAL	LINEN	00000005
510985.39000	4276561.72000	0.03443	48.02	48.02	0.00	ANNUAL	LINEN	00000005

511025.27000	4276572.93000	0.03746	48.12	48.12	0.00	ANNUAL	LINEN	00000005
511039.72000	4276569.26000	0.03867	49.49	49.49	0.00	ANNUAL	LINEN	00000005
511021.39000	4276549.00000	0.03635	48.00	48.00	0.00	ANNUAL	LINEN	00000005
511014.50000	4276530.03000	0.03528	48.04	48.04	0.00	ANNUAL	LINEN	00000005
511041.66000	4276545.12000	0.03798	49.73	49.73	0.00	ANNUAL	LINEN	00000005
511034.33000	4276536.50000	0.03703	49.02	49.02	0.00	ANNUAL	LINEN	00000005
510959.53000	4276510.20000	0.03157	48.46	48.46	0.00	ANNUAL	LINEN	00000005
510971.81000	4276510.84000	0.03221	48.37	48.37	0.00	ANNUAL	LINEN	00000005
510964.91000	4276497.69000	0.03151	48.54	48.54	0.00	ANNUAL	LINEN	00000005
510962.11000	4276476.57000	0.03084	48.76	48.76	0.00	ANNUAL	LINEN	00000005
510962.54000	4276462.34000	0.03051	48.83	48.83	0.00	ANNUAL	LINEN	00000005
511001.78000	4276503.30000	0.03368	48.18	48.18	0.00	ANNUAL	LINEN	00000005
510995.74000	4276530.46000	0.03411	48.12	48.12	0.00	ANNUAL	LINEN	00000005
511026.57000	4276504.16000	0.03531	48.26	48.26	0.00	ANNUAL	LINEN	00000005
511041.44000	4276504.59000	0.03659	49.81	49.81	0.00	ANNUAL	LINEN	00000005
511034.33000	4276471.61000	0.03495	49.11	56.00	0.00	ANNUAL	LINEN	00000005
511029.15000	4276461.26000	0.03424	48.66	60.00	0.00	ANNUAL	LINEN	00000005
511013.20000	4276427.63000	0.03238	48.79	60.00	0.00	ANNUAL	LINEN	00000005
511012.50000	4276387.62000	0.03139	49.44	60.00	0.00	ANNUAL	LINEN	00000005
511077.94000	4276401.42000	0.03588	56.35	60.00	0.00	ANNUAL	LINEN	00000005
511037.26000	4276343.40000	0.03157	50.72	60.00	0.00	ANNUAL	LINEN	00000005
511102.71000	4276389.03000	0.03665	59.39	59.39	0.00	ANNUAL	LINEN	00000005
511104.83000	4276341.98000	0.03479	57.26	57.26	0.00	ANNUAL	LINEN	00000005
511099.17000	4276325.00000	0.03383	55.42	55.42	0.00	ANNUAL	LINEN	00000005
511149.05000	4276347.29000	0.03688	59.28	59.28	0.00	ANNUAL	LINEN	00000005
511175.94000	4276353.30000	0.03851	60.00	60.00	0.00	ANNUAL	LINEN	00000005
511200.71000	4276325.35000	0.03885	60.00	60.00	0.00	ANNUAL	LINEN	00000005
511144.81000	4276305.90000	0.03501	57.76	57.76	0.00	ANNUAL	LINEN	00000005
511132.43000	4276291.39000	0.03385	55.91	60.00	0.00	ANNUAL	LINEN	00000005
511089.62000	4276270.16000	0.03116	50.38	60.00	0.00	ANNUAL	LINEN	00000005
511056.01000	4276256.72000	0.02960	48.96	48.96	0.00	ANNUAL	LINEN	00000005
511114.38000	4276223.11000	0.03051	50.82	60.00	0.00	ANNUAL	LINEN	00000005
511056.01000	4276193.39000	0.02779	48.07	48.07	0.00	ANNUAL	LINEN	00000005
511065.21000	4276110.96000	0.02597	48.00	48.00	0.00	ANNUAL	LINEN	00000005
511120.40000	4276103.53000	0.02723	48.15	48.15	0.00	ANNUAL	LINEN	00000005
511146.58000	4276086.91000	0.02774	48.00	48.00	0.00	ANNUAL	LINEN	00000005
511054.60000	4276057.54000	0.02456	48.00	48.00	0.00	ANNUAL	LINEN	00000005
511079.71000	4276059.31000	0.02512	48.00	48.00	0.00	ANNUAL	LINEN	00000005
511063.79000	4276032.07000	0.02421	48.00	48.00	0.00	ANNUAL	LINEN	00000005
511091.03000	4276029.59000	0.02476	48.00	48.00	0.00	ANNUAL	LINEN	00000005
511112.26000	4276047.99000	0.02572	48.00	48.00	0.00	ANNUAL	LINEN	00000005
511148.35000	4276034.55000	0.02665	48.00	48.00	0.00	ANNUAL	LINEN	00000005
511187.26000	4276047.99000	0.02862	48.46	48.46	0.00	ANNUAL	LINEN	00000005
511099.18000	4276852.79000	0.06097	48.32	56.00	0.00	ANNUAL	LINEN	00000005
511091.40000	4276809.98000	0.05633	48.05	60.00	0.00	ANNUAL	LINEN	00000005
511126.42000	4276783.80000	0.06095	52.27	60.00	0.00	ANNUAL	LINEN	00000005
511155.44000	4276841.83000	0.07265	54.44	56.00	0.00	ANNUAL	LINEN	00000005
511197.19000	4276843.95000	0.08237	57.47	57.47	0.00	ANNUAL	LINEN	00000005
511240.00000	4276846.07000	0.09264	59.93	59.93	0.00	ANNUAL	LINEN	00000005
511290.59000	4276850.67000	0.10763	60.00	60.00	0.00	ANNUAL	LINEN	00000005
511322.08000	4276852.44000	0.11864	60.10	60.10	0.00	ANNUAL	LINEN	00000005
511271.92000	4276788.58000	0.08881	59.70	59.70	0.00	ANNUAL	LINEN	00000005
511269.62000	4276751.13000	0.08183	59.44	59.44	0.00	ANNUAL	LINEN	00000005
511286.90000	4276724.63000	0.08118	59.70	59.70	0.00	ANNUAL	LINEN	00000005
511322.05000	4276714.26000	0.08693	60.15	60.15	0.00	ANNUAL	LINEN	00000005
511347.40000	4276753.44000	0.10040	60.46	60.46	0.00	ANNUAL	LINEN	00000005
511324.93000	4276787.43000	0.10218	60.15	60.15	0.00	ANNUAL	LINEN	00000005
511395.79000	4276750.56000	0.11125	61.11	61.11	0.00	ANNUAL	LINEN	00000005
511433.82000	4276788.58000	0.13204	61.02	61.02	0.00	ANNUAL	LINEN	00000005
511474.15000	4276802.99000	0.14680	60.57	60.57	0.00	ANNUAL	LINEN	00000005
511455.71000	4276828.34000	0.15313	60.21	60.21	0.00	ANNUAL	LINEN	00000005
511396.49000	4276844.26000	0.14213	60.79	60.79	0.00	ANNUAL	LINEN	00000005
511369.02000	4276870.90000	0.14308	60.48	60.48	0.00	ANNUAL	LINEN	00000005
511333.22000	4276911.69000	0.14515	60.05	60.05	0.00	ANNUAL	LINEN	00000005
511305.33000	4276950.31000	0.14949	59.51	59.51	0.00	ANNUAL	LINEN	00000005
511416.46000	4276868.95000	0.16026	60.38	60.38	0.00	ANNUAL	LINEN	00000005
511406.83000	4276881.28000	0.16290	60.37	60.37	0.00	ANNUAL	LINEN	00000005
511400.52000	4276896.01000	0.16815	60.28	60.28	0.00	ANNUAL	LINEN	00000005
511389.39000	4276913.76000	0.17322	60.16	60.16	0.00	ANNUAL	LINEN	00000005
511368.34000	4276928.80000	0.17157	60.00	60.00	0.00	ANNUAL	LINEN	00000005
511356.31000	4276946.84000	0.17585	59.72	59.72	0.00	ANNUAL	LINEN	00000005
511350.29000	4276960.98000	0.18134	59.48	59.48	0.00	ANNUAL	LINEN	00000005
511337.96000	4276975.41000	0.18321	59.16	59.16	0.00	ANNUAL	LINEN	00000005
511320.22000	4276989.55000	0.18105	58.75	58.75	0.00	ANNUAL	LINEN	00000005

511421.25000	4276982.31000	0.23784	59.42	59.42	0.00	ANNUAL	LINEN	00000005
511435.82000	4276972.74000	0.23446	59.53	59.53	0.00	ANNUAL	LINEN	00000005
511407.51000	4276951.92000	0.20707	59.75	59.75	0.00	ANNUAL	LINEN	00000005
511416.67000	4276936.52000	0.19987	59.92	59.92	0.00	ANNUAL	LINEN	00000005
511441.65000	4276961.50000	0.22696	59.65	59.65	0.00	ANNUAL	LINEN	00000005
511428.75000	4276926.11000	0.19730	60.01	60.01	0.00	ANNUAL	LINEN	00000005
511451.64000	4276947.34000	0.21873	59.80	59.80	0.00	ANNUAL	LINEN	00000005
511435.82000	4276912.79000	0.19108	60.05	60.05	0.00	ANNUAL	LINEN	00000005
511462.88000	4276936.52000	0.21349	59.92	59.92	0.00	ANNUAL	LINEN	00000005
510943.27000	4276699.02000	0.03578	48.87	48.87	0.00	ANNUAL	LINEN	00000005
510940.61000	4276686.09000	0.03529	49.08	49.08	0.00	ANNUAL	LINEN	00000005
510936.99000	4276669.16000	0.03464	49.32	49.32	0.00	ANNUAL	LINEN	00000005
510931.47000	4276639.48000	0.03355	49.43	49.43	0.00	ANNUAL	LINEN	00000005
510924.06000	4276619.89000	0.03261	49.42	49.42	0.00	ANNUAL	LINEN	00000005
510637.00000	4276777.21000	0.02333	61.78	61.78	0.00	ANNUAL	LINEN	00000005
510548.73000	4276774.18000	0.01992	60.83	60.83	0.00	ANNUAL	LINEN	00000005
510547.21000	4276898.28000	0.01931	68.09	68.09	0.00	ANNUAL	LINEN	00000005
510551.25000	4276958.30000	0.01907	71.63	71.63	0.00	ANNUAL	LINEN	00000005
510650.62000	4277053.14000	0.02333	71.89	71.89	0.00	ANNUAL	LINEN	00000005
510672.82000	4277035.48000	0.02459	70.77	70.77	0.00	ANNUAL	LINEN	00000005
510685.93000	4277000.17000	0.02559	68.82	68.82	0.00	ANNUAL	LINEN	00000005
510709.64000	4277123.25000	0.02656	73.11	73.11	0.00	ANNUAL	LINEN	00000005
510551.75000	4277065.75000	0.01934	73.00	73.00	0.00	ANNUAL	LINEN	00000005
510585.55000	4277002.69000	0.02016	72.97	72.97	0.00	ANNUAL	LINEN	00000005
510681.05000	4277526.30000	0.02458	89.78	97.00	0.00	ANNUAL	LINEN	00000005
510602.09000	4277543.05000	0.01947	95.78	95.78	0.00	ANNUAL	LINEN	00000005
510585.34000	4277602.27000	0.01909	96.17	96.17	0.00	ANNUAL	LINEN	00000005
510520.14000	4277627.40000	0.01762	90.50	90.50	0.00	ANNUAL	LINEN	00000005
510477.07000	4277653.12000	0.01748	84.70	97.00	0.00	ANNUAL	LINEN	00000005
510525.39000	4277547.10000	0.01695	93.30	93.30	0.00	ANNUAL	LINEN	00000005
510511.13000	4277494.37000	0.01666	90.21	90.21	0.00	ANNUAL	LINEN	00000005
510485.63000	4277496.53000	0.01624	88.33	88.33	0.00	ANNUAL	LINEN	00000005
510439.39000	4277515.55000	0.01583	84.61	84.61	0.00	ANNUAL	LINEN	00000005
510369.82000	4277592.96000	0.01632	75.40	94.00	0.00	ANNUAL	LINEN	00000005
510394.07000	4277635.94000	0.01675	76.79	97.00	0.00	ANNUAL	LINEN	00000005
510368.35000	4277565.04000	0.01611	75.93	94.00	0.00	ANNUAL	LINEN	00000005
510301.12000	4277596.64000	0.01497	73.12	73.12	0.00	ANNUAL	LINEN	00000005
510299.29000	4277636.31000	0.01491	73.03	73.03	0.00	ANNUAL	LINEN	00000005
510267.33000	4277553.29000	0.01410	73.00	73.00	0.00	ANNUAL	LINEN	00000005
510193.12000	4277549.61000	0.01249	72.88	72.88	0.00	ANNUAL	LINEN	00000005
510147.56000	4277487.90000	0.01176	71.93	71.93	0.00	ANNUAL	LINEN	00000005
510241.24000	4277332.50000	0.01318	72.62	72.62	0.00	ANNUAL	LINEN	00000005
510316.19000	4277344.99000	0.01474	72.62	72.62	0.00	ANNUAL	LINEN	00000005
510275.41000	4277252.05000	0.01292	72.40	72.40	0.00	ANNUAL	LINEN	00000005
510322.06000	4277228.54000	0.01349	72.91	72.91	0.00	ANNUAL	LINEN	00000005
510168.14000	4277155.06000	0.01228	60.88	69.00	0.00	ANNUAL	LINEN	00000005
510109.73000	4277094.81000	0.01127	60.00	60.00	0.00	ANNUAL	LINEN	00000005
510170.34000	4277081.59000	0.01209	60.00	60.00	0.00	ANNUAL	LINEN	00000005
510264.36000	4276914.24000	0.01333	60.00	60.00	0.00	ANNUAL	LINEN	00000005
510199.10000	4276903.44000	0.01223	60.00	60.00	0.00	ANNUAL	LINEN	00000005
510157.61000	4276829.53000	0.01151	60.00	60.00	0.00	ANNUAL	LINEN	00000005
510201.26000	4276808.79000	0.01209	60.00	60.00	0.00	ANNUAL	LINEN	00000005
510259.18000	4276827.37000	0.01307	60.00	60.00	0.00	ANNUAL	LINEN	00000005
510308.02000	4276868.86000	0.01406	60.00	60.00	0.00	ANNUAL	LINEN	00000005
510330.92000	4276810.08000	0.01439	60.00	60.00	0.00	ANNUAL	LINEN	00000005
510353.40000	4276998.95000	0.01509	63.90	63.90	0.00	ANNUAL	LINEN	00000005
510358.58000	4276903.01000	0.01522	60.00	60.00	0.00	ANNUAL	LINEN	00000005
510463.34000	4276900.64000	0.01756	63.97	63.97	0.00	ANNUAL	LINEN	00000005
510416.09000	4276851.59000	0.01640	60.45	60.45	0.00	ANNUAL	LINEN	00000005
510411.30000	4276825.86000	0.01621	60.00	60.00	0.00	ANNUAL	LINEN	00000005
510422.67000	4276746.90000	0.01626	60.00	60.00	0.00	ANNUAL	LINEN	00000005
510452.36000	4276669.61000	0.01678	60.00	60.00	0.00	ANNUAL	LINEN	00000005
510518.97000	4276678.76000	0.01865	60.00	60.00	0.00	ANNUAL	LINEN	00000005
510563.21000	4276656.90000	0.01992	60.00	60.00	0.00	ANNUAL	LINEN	00000005
510600.33000	4276627.41000	0.02086	59.75	59.75	0.00	ANNUAL	LINEN	00000005
510571.86000	4276593.85000	0.01969	59.39	59.39	0.00	ANNUAL	LINEN	00000005
510522.02000	4276624.36000	0.01850	59.72	59.72	0.00	ANNUAL	LINEN	00000005
510525.92000	4276534.30000	0.01795	58.46	58.46	0.00	ANNUAL	LINEN	00000005
510468.25000	4276503.81000	0.01645	58.61	58.61	0.00	ANNUAL	LINEN	00000005
510476.70000	4276581.69000	0.01709	59.26	59.26	0.00	ANNUAL	LINEN	00000005
510425.26000	4276527.32000	0.01570	59.26	59.26	0.00	ANNUAL	LINEN	00000005
510398.44000	4276557.45000	0.01525	59.63	59.63	0.00	ANNUAL	LINEN	00000005
510371.12000	4276602.00000	0.01480	60.00	60.00	0.00	ANNUAL	LINEN	00000005
510328.51000	4276635.80000	0.01403	60.00	60.00	0.00	ANNUAL	LINEN	00000005

510339.90000	4276656.37000	0.01428	60.00	60.00	0.00	ANNUAL	LINEN	00000005
510329.33000	4276697.73000	0.01415	60.00	60.00	0.00	ANNUAL	LINEN	00000005
511060.04000	4278365.13000	0.33054	60.00	60.00	0.00	ANNUAL	LINEN	00000005
511053.55000	4278281.17000	0.29070	60.00	60.00	0.00	ANNUAL	LINEN	00000005
511449.69000	4278012.31000	3.08774	60.00	60.00	0.00	ANNUAL	LINEN	00000005
511463.60000	4278021.57000	2.47126	60.00	60.00	0.00	ANNUAL	LINEN	00000005
511584.50000	4278030.79000	0.77163	60.00	60.00	0.00	ANNUAL	LINEN	00000005
511579.17000	4278016.57000	0.81873	60.00	60.00	0.00	ANNUAL	LINEN	00000005
511643.38000	4278010.53000	0.54131	60.00	60.00	0.00	ANNUAL	LINEN	00000005
511658.54000	4277976.09000	0.51476	60.00	60.00	0.00	ANNUAL	LINEN	00000005
511473.56000	4278066.24000	1.91664	60.00	60.00	0.00	ANNUAL	LINEN	00000005
510844.05000	4276334.61000	0.02347	48.00	48.00	0.00	ANNUAL	LINEN	00000005
510819.00000	4276360.66000	0.02314	48.00	48.00	0.00	ANNUAL	LINEN	00000005
510812.25000	4276338.82000	0.02264	48.00	48.00	0.00	ANNUAL	LINEN	00000005
510766.27000	4276358.28000	0.02149	48.56	48.56	0.00	ANNUAL	LINEN	00000005
510788.08000	4276480.90000	0.02363	49.84	49.84	0.00	ANNUAL	LINEN	00000005
510862.95000	4276608.23000	0.02908	51.92	60.00	0.00	ANNUAL	LINEN	00000005
510849.39000	4276591.14000	0.02813	52.45	60.00	0.00	ANNUAL	LINEN	00000005
510838.19000	4276539.85000	0.02665	51.04	51.04	0.00	ANNUAL	LINEN	00000005

** CONCUNIT ug/m^3

** DEPUNIT g/m^2

* AERMOD (18081): C:\Users\kjohnson\Desktop\NEAP HRA\NorthEntry\NorthEntry.isc 08/24/18
 * AERMET (14134): 08:25:30
 * MODELING OPTIONS USED: RegDFAULT CONC ELEV URBAN
 * PLOT FILE OF ANNUAL VALUES AVERAGED ACROSS 5 YEARS FOR SOURCE GROUP: LINES
 * FOR A TOTAL OF 233 RECEPTORS.
 * FORMAT: (3(1X,F13.5),3(1X,F8.2),2X,A6,2X,A8,2X,I8.8,2X,A8)
 * X Y AVERAGE CONC ZELEV ZHILL ZFLAG AVE GRP NUM YRS NET ID
 *

511141.17000	4277077.82000	3.61480	54.06	54.06	0.00	ANNUAL	LINES	00000005
511177.30000	4277063.56000	2.21847	55.65	55.65	0.00	ANNUAL	LINES	00000005
511115.23000	4277044.70000	4.28994	51.42	51.42	0.00	ANNUAL	LINES	00000005
511127.93000	4277027.53000	3.28742	51.84	51.84	0.00	ANNUAL	LINES	00000005
511112.48000	4276990.10000	3.46104	50.03	50.03	0.00	ANNUAL	LINES	00000005
511152.66000	4277006.58000	2.25686	53.54	53.54	0.00	ANNUAL	LINES	00000005
511185.29000	4276993.19000	1.59504	55.44	55.44	0.00	ANNUAL	LINES	00000005
511245.73000	4277021.01000	1.13766	57.07	57.07	0.00	ANNUAL	LINES	00000005
511278.70000	4277033.03000	0.95695	57.52	57.52	0.00	ANNUAL	LINES	00000005
511308.58000	4277036.12000	0.79668	57.93	57.93	0.00	ANNUAL	LINES	00000005
511319.91000	4277044.70000	0.75252	58.09	58.09	0.00	ANNUAL	LINES	00000005
511336.05000	4277053.98000	0.68436	58.31	58.31	0.00	ANNUAL	LINES	00000005
511350.30000	4277017.64000	0.58893	58.57	58.57	0.00	ANNUAL	LINES	00000005
511371.36000	4277040.35000	0.52655	58.80	58.80	0.00	ANNUAL	LINES	00000005
511359.18000	4277004.82000	0.54667	58.87	58.87	0.00	ANNUAL	LINES	00000005
511380.24000	4277027.53000	0.49100	58.92	58.92	0.00	ANNUAL	LINES	00000005
511370.17000	4276993.10000	0.50372	59.15	59.15	0.00	ANNUAL	LINES	00000005
511391.78000	4277015.07000	0.45199	59.07	59.07	0.00	ANNUAL	LINES	00000005
511417.05000	4277042.36000	0.39442	59.00	59.00	0.00	ANNUAL	LINES	00000005
511377.68000	4276982.47000	0.47617	59.35	59.35	0.00	ANNUAL	LINES	00000005
511400.94000	4277005.00000	0.42455	59.18	59.18	0.00	ANNUAL	LINES	00000005
511412.84000	4276995.66000	0.39383	59.28	59.28	0.00	ANNUAL	LINES	00000005
511437.57000	4277020.75000	0.34754	59.01	59.01	0.00	ANNUAL	LINES	00000005
511426.67000	4277032.47000	0.37124	59.00	59.00	0.00	ANNUAL	LINES	00000005
511447.91000	4277011.04000	0.32709	59.11	59.11	0.00	ANNUAL	LINES	00000005
511458.35000	4276998.96000	0.30813	59.24	59.24	0.00	ANNUAL	LINES	00000005
511467.33000	4276989.25000	0.29293	59.43	59.43	0.00	ANNUAL	LINES	00000005
511477.22000	4276977.16000	0.27761	59.61	59.61	0.00	ANNUAL	LINES	00000005
511488.57000	4276969.65000	0.26185	59.74	59.74	0.00	ANNUAL	LINES	00000005
511498.09000	4276955.18000	0.24954	59.87	59.87	0.00	ANNUAL	LINES	00000005
511388.39000	4276972.03000	0.44313	59.53	59.53	0.00	ANNUAL	LINES	00000005
511399.38000	4276962.14000	0.41336	59.64	59.64	0.00	ANNUAL	LINES	00000005
511400.53000	4278315.27000	0.06912	60.00	60.00	0.00	ANNUAL	LINES	00000005
511340.62000	4278311.18000	0.07837	60.00	60.00	0.00	ANNUAL	LINES	00000005
511345.14000	4278296.52000	0.07891	60.00	60.00	0.00	ANNUAL	LINES	00000005
511364.54000	4278312.47000	0.07473	60.00	60.00	0.00	ANNUAL	LINES	00000005
511209.12000	4276947.27000	1.17553	57.11	57.11	0.00	ANNUAL	LINES	00000005
511176.13000	4276927.62000	1.45589	54.64	54.64	0.00	ANNUAL	LINES	00000005
511219.65000	4276925.86000	1.03479	58.24	58.24	0.00	ANNUAL	LINES	00000005
511196.49000	4276892.17000	1.13906	56.79	56.79	0.00	ANNUAL	LINES	00000005
511003.40000	4276731.86000	10.36559	48.03	48.03	0.00	ANNUAL	LINES	00000005
510998.10000	4276717.84000	11.09401	48.10	48.10	0.00	ANNUAL	LINES	00000005
511028.47000	4276724.85000	5.45369	48.08	48.08	0.00	ANNUAL	LINES	00000005
511051.99000	4276724.69000	3.62046	48.47	48.47	0.00	ANNUAL	LINES	00000005
511131.57000	4276736.84000	1.43418	54.06	60.00	0.00	ANNUAL	LINES	00000005
511001.84000	4276671.43000	7.70438	48.24	48.24	0.00	ANNUAL	LINES	00000005
511001.84000	4276650.09000	6.91395	48.30	48.30	0.00	ANNUAL	LINES	00000005
511020.22000	4276632.96000	4.41557	48.04	48.04	0.00	ANNUAL	LINES	00000005
511038.75000	4276665.82000	3.65875	49.03	49.03	0.00	ANNUAL	LINES	00000005
511039.53000	4276636.23000	3.28189	49.32	49.32	0.00	ANNUAL	LINES	00000005
511082.20000	4276682.64000	2.12660	51.17	51.17	0.00	ANNUAL	LINES	00000005
511107.74000	4276673.92000	1.56697	53.68	53.68	0.00	ANNUAL	LINES	00000005
511082.67000	4276634.05000	1.84176	53.01	53.01	0.00	ANNUAL	LINES	00000005
511110.54000	4276628.29000	1.35728	55.36	55.36	0.00	ANNUAL	LINES	00000005
511127.99000	4276630.94000	1.16489	56.73	56.73	0.00	ANNUAL	LINES	00000005
511125.03000	4276675.95000	1.32193	55.39	55.39	0.00	ANNUAL	LINES	00000005
511144.81000	4276679.06000	1.10849	57.40	57.40	0.00	ANNUAL	LINES	00000005
511150.72000	4276637.95000	0.97630	58.53	58.53	0.00	ANNUAL	LINES	00000005
511169.10000	4276687.47000	0.91319	60.00	60.00	0.00	ANNUAL	LINES	00000005
511171.75000	4276641.37000	0.83989	60.00	60.00	0.00	ANNUAL	LINES	00000005
510972.24000	4276568.62000	9.54637	48.08	48.08	0.00	ANNUAL	LINES	00000005
510970.09000	4276558.27000	9.54705	48.00	48.00	0.00	ANNUAL	LINES	00000005
510968.79000	4276547.92000	9.43642	48.09	48.09	0.00	ANNUAL	LINES	00000005
510965.99000	4276537.57000	9.71816	48.18	48.18	0.00	ANNUAL	LINES	00000005
510988.84000	4276570.99000	6.39917	48.07	48.07	0.00	ANNUAL	LINES	00000005
510985.39000	4276561.72000	6.63621	48.02	48.02	0.00	ANNUAL	LINES	00000005

511025.27000	4276572.93000	3.34471	48.12	48.12	0.00	ANNUAL	LINES	00000005
511039.72000	4276569.26000	2.70022	49.49	49.49	0.00	ANNUAL	LINES	00000005
511021.39000	4276549.00000	3.29799	48.00	48.00	0.00	ANNUAL	LINES	00000005
511014.50000	4276530.03000	3.46454	48.04	48.04	0.00	ANNUAL	LINES	00000005
511041.66000	4276545.12000	2.46950	49.73	49.73	0.00	ANNUAL	LINES	00000005
511034.33000	4276536.50000	2.67823	49.02	49.02	0.00	ANNUAL	LINES	00000005
510959.53000	4276510.20000	10.39956	48.46	48.46	0.00	ANNUAL	LINES	00000005
510971.81000	4276510.84000	7.51261	48.37	48.37	0.00	ANNUAL	LINES	00000005
510964.91000	4276497.69000	8.60838	48.54	48.54	0.00	ANNUAL	LINES	00000005
510962.11000	4276476.57000	8.77969	48.76	48.76	0.00	ANNUAL	LINES	00000005
510962.54000	4276462.34000	8.40283	48.83	48.83	0.00	ANNUAL	LINES	00000005
511001.78000	4276503.30000	3.95213	48.18	48.18	0.00	ANNUAL	LINES	00000005
510995.74000	4276530.46000	4.76764	48.12	48.12	0.00	ANNUAL	LINES	00000005
511026.57000	4276504.16000	2.73723	48.26	48.26	0.00	ANNUAL	LINES	00000005
511041.44000	4276504.59000	2.24825	49.81	49.81	0.00	ANNUAL	LINES	00000005
511034.33000	4276471.61000	2.29624	49.11	56.00	0.00	ANNUAL	LINES	00000005
511029.15000	4276461.26000	2.39894	48.66	60.00	0.00	ANNUAL	LINES	00000005
511013.20000	4276427.63000	2.76506	48.79	60.00	0.00	ANNUAL	LINES	00000005
511012.50000	4276387.62000	2.49610	49.44	60.00	0.00	ANNUAL	LINES	00000005
511077.94000	4276401.42000	1.08085	56.35	60.00	0.00	ANNUAL	LINES	00000005
511037.26000	4276343.40000	1.50148	50.72	60.00	0.00	ANNUAL	LINES	00000005
511102.71000	4276389.03000	0.81719	59.39	59.39	0.00	ANNUAL	LINES	00000005
511104.83000	4276341.98000	0.75030	57.26	57.26	0.00	ANNUAL	LINES	00000005
511099.17000	4276325.00000	0.77304	55.42	55.42	0.00	ANNUAL	LINES	00000005
511149.05000	4276347.29000	0.57549	59.28	59.28	0.00	ANNUAL	LINES	00000005
511175.94000	4276353.30000	0.50859	60.00	60.00	0.00	ANNUAL	LINES	00000005
511200.71000	4276325.35000	0.43864	60.00	60.00	0.00	ANNUAL	LINES	00000005
511144.81000	4276305.90000	0.55751	57.76	57.76	0.00	ANNUAL	LINES	00000005
511132.43000	4276291.39000	0.59536	55.91	60.00	0.00	ANNUAL	LINES	00000005
511089.62000	4276270.16000	0.77746	50.38	60.00	0.00	ANNUAL	LINES	00000005
511056.01000	4276256.72000	0.95458	48.96	48.96	0.00	ANNUAL	LINES	00000005
511114.38000	4276223.11000	0.60427	50.82	60.00	0.00	ANNUAL	LINES	00000005
511056.01000	4276193.39000	0.75506	48.07	48.07	0.00	ANNUAL	LINES	00000005
511065.21000	4276110.96000	0.50692	48.00	48.00	0.00	ANNUAL	LINES	00000005
511120.40000	4276103.53000	0.43630	48.15	48.15	0.00	ANNUAL	LINES	00000005
511146.58000	4276086.91000	0.38991	48.00	48.00	0.00	ANNUAL	LINES	00000005
511054.60000	4276057.54000	0.40757	48.00	48.00	0.00	ANNUAL	LINES	00000005
511079.71000	4276059.31000	0.40189	48.00	48.00	0.00	ANNUAL	LINES	00000005
511063.79000	4276032.07000	0.36597	48.00	48.00	0.00	ANNUAL	LINES	00000005
511091.03000	4276029.59000	0.35654	48.00	48.00	0.00	ANNUAL	LINES	00000005
511112.26000	4276047.99000	0.36905	48.00	48.00	0.00	ANNUAL	LINES	00000005
511148.35000	4276034.55000	0.33555	48.00	48.00	0.00	ANNUAL	LINES	00000005
511187.26000	4276047.99000	0.32419	48.46	48.46	0.00	ANNUAL	LINES	00000005
511099.18000	4276852.79000	2.73272	48.32	56.00	0.00	ANNUAL	LINES	00000005
511091.40000	4276809.98000	2.68766	48.05	60.00	0.00	ANNUAL	LINES	00000005
511126.42000	4276783.80000	1.69417	52.27	60.00	0.00	ANNUAL	LINES	00000005
511155.44000	4276841.83000	1.43307	54.44	56.00	0.00	ANNUAL	LINES	00000005
511197.19000	4276843.95000	1.02943	57.47	57.47	0.00	ANNUAL	LINES	00000005
511240.00000	4276846.07000	0.78070	59.93	59.93	0.00	ANNUAL	LINES	00000005
511290.59000	4276850.67000	0.61388	60.00	60.00	0.00	ANNUAL	LINES	00000005
511322.08000	4276852.44000	0.53238	60.10	60.10	0.00	ANNUAL	LINES	00000005
511271.92000	4276788.58000	0.61714	59.70	59.70	0.00	ANNUAL	LINES	00000005
511269.62000	4276751.13000	0.59698	59.44	59.44	0.00	ANNUAL	LINES	00000005
511286.90000	4276724.63000	0.53225	59.70	59.70	0.00	ANNUAL	LINES	00000005
511322.05000	4276714.26000	0.45006	60.15	60.15	0.00	ANNUAL	LINES	00000005
511347.40000	4276753.44000	0.42232	60.46	60.46	0.00	ANNUAL	LINES	00000005
511324.93000	4276787.43000	0.48400	60.15	60.15	0.00	ANNUAL	LINES	00000005
511395.79000	4276750.56000	0.34479	61.11	61.11	0.00	ANNUAL	LINES	00000005
511433.82000	4276788.58000	0.30495	61.02	61.02	0.00	ANNUAL	LINES	00000005
511474.15000	4276802.99000	0.26105	60.57	60.57	0.00	ANNUAL	LINES	00000005
511455.71000	4276828.34000	0.28682	60.21	60.21	0.00	ANNUAL	LINES	00000005
511396.49000	4276844.26000	0.37488	60.79	60.79	0.00	ANNUAL	LINES	00000005
511369.02000	4276870.90000	0.43746	60.48	60.48	0.00	ANNUAL	LINES	00000005
511333.22000	4276911.69000	0.54734	60.05	60.05	0.00	ANNUAL	LINES	00000005
511305.33000	4276950.31000	0.67285	59.51	59.51	0.00	ANNUAL	LINES	00000005
511416.46000	4276868.95000	0.35045	60.38	60.38	0.00	ANNUAL	LINES	00000005
511406.83000	4276881.28000	0.37023	60.37	60.37	0.00	ANNUAL	LINES	00000005
511400.52000	4276896.01000	0.38661	60.28	60.28	0.00	ANNUAL	LINES	00000005
511389.39000	4276913.76000	0.41534	60.16	60.16	0.00	ANNUAL	LINES	00000005
511368.34000	4276928.80000	0.46995	60.00	60.00	0.00	ANNUAL	LINES	00000005
511356.31000	4276946.84000	0.51254	59.72	59.72	0.00	ANNUAL	LINES	00000005
511350.29000	4276960.98000	0.54064	59.48	59.48	0.00	ANNUAL	LINES	00000005
511337.96000	4276975.41000	0.59246	59.16	59.16	0.00	ANNUAL	LINES	00000005
511320.22000	4276989.55000	0.67248	58.75	58.75	0.00	ANNUAL	LINES	00000005

511421.25000	4276982.31000	0.37259	59.42	59.42	0.00	ANNUAL	LINES	00000005
511435.82000	4276972.74000	0.34276	59.53	59.53	0.00	ANNUAL	LINES	00000005
511407.51000	4276951.92000	0.39234	59.75	59.75	0.00	ANNUAL	LINES	00000005
511416.67000	4276936.52000	0.36948	59.92	59.92	0.00	ANNUAL	LINES	00000005
511441.65000	4276961.50000	0.33053	59.65	59.65	0.00	ANNUAL	LINES	00000005
511428.75000	4276926.11000	0.34506	60.01	60.01	0.00	ANNUAL	LINES	00000005
511451.64000	4276947.34000	0.31211	59.80	59.80	0.00	ANNUAL	LINES	00000005
511435.82000	4276912.79000	0.33053	60.05	60.05	0.00	ANNUAL	LINES	00000005
511462.88000	4276936.52000	0.29394	59.92	59.92	0.00	ANNUAL	LINES	00000005
510943.27000	4276699.02000	7.08966	48.87	48.87	0.00	ANNUAL	LINES	00000005
510940.61000	4276686.09000	7.06600	49.08	49.08	0.00	ANNUAL	LINES	00000005
510936.99000	4276669.16000	7.00920	49.32	49.32	0.00	ANNUAL	LINES	00000005
510931.47000	4276639.48000	7.10249	49.43	49.43	0.00	ANNUAL	LINES	00000005
510924.06000	4276619.89000	6.32988	49.42	49.42	0.00	ANNUAL	LINES	00000005
510637.00000	4276777.21000	0.17199	61.78	61.78	0.00	ANNUAL	LINES	00000005
510548.73000	4276774.18000	0.10462	60.83	60.83	0.00	ANNUAL	LINES	00000005
510547.21000	4276898.28000	0.10491	68.09	68.09	0.00	ANNUAL	LINES	00000005
510551.25000	4276958.30000	0.10776	71.63	71.63	0.00	ANNUAL	LINES	00000005
510650.62000	4277053.14000	0.17630	71.89	71.89	0.00	ANNUAL	LINES	00000005
510672.82000	4277035.48000	0.19881	70.77	70.77	0.00	ANNUAL	LINES	00000005
510685.93000	4277000.17000	0.21831	68.82	68.82	0.00	ANNUAL	LINES	00000005
510709.64000	4277123.25000	0.22645	73.11	73.11	0.00	ANNUAL	LINES	00000005
510551.75000	4277065.75000	0.11248	73.00	73.00	0.00	ANNUAL	LINES	00000005
510585.55000	4277002.69000	0.12814	72.97	72.97	0.00	ANNUAL	LINES	00000005
510681.05000	4277526.30000	0.14278	89.78	97.00	0.00	ANNUAL	LINES	00000005
510602.09000	4277543.05000	0.11026	95.78	95.78	0.00	ANNUAL	LINES	00000005
510585.34000	4277602.27000	0.10210	96.17	96.17	0.00	ANNUAL	LINES	00000005
510520.14000	4277627.40000	0.08658	90.50	90.50	0.00	ANNUAL	LINES	00000005
510477.07000	4277653.12000	0.07903	84.70	97.00	0.00	ANNUAL	LINES	00000005
510525.39000	4277547.10000	0.08945	93.30	93.30	0.00	ANNUAL	LINES	00000005
510511.13000	4277494.37000	0.08808	90.21	90.21	0.00	ANNUAL	LINES	00000005
510485.63000	4277496.53000	0.08254	88.33	88.33	0.00	ANNUAL	LINES	00000005
510439.39000	4277515.55000	0.07364	84.61	84.61	0.00	ANNUAL	LINES	00000005
510369.82000	4277592.96000	0.06501	75.40	94.00	0.00	ANNUAL	LINES	00000005
510394.07000	4277635.94000	0.06821	76.79	97.00	0.00	ANNUAL	LINES	00000005
510368.35000	4277565.04000	0.06443	75.93	94.00	0.00	ANNUAL	LINES	00000005
510301.12000	4277596.64000	0.05610	73.12	73.12	0.00	ANNUAL	LINES	00000005
510299.29000	4277636.31000	0.05625	73.03	73.03	0.00	ANNUAL	LINES	00000005
510267.33000	4277553.29000	0.05127	73.00	73.00	0.00	ANNUAL	LINES	00000005
510193.12000	4277549.61000	0.04264	72.88	72.88	0.00	ANNUAL	LINES	00000005
510147.56000	4277487.90000	0.03720	71.93	71.93	0.00	ANNUAL	LINES	00000005
510241.24000	4277332.50000	0.04360	72.62	72.62	0.00	ANNUAL	LINES	00000005
510316.19000	4277344.99000	0.05466	72.62	72.62	0.00	ANNUAL	LINES	00000005
510275.41000	4277252.05000	0.04678	72.40	72.40	0.00	ANNUAL	LINES	00000005
510322.06000	4277228.54000	0.05308	72.91	72.91	0.00	ANNUAL	LINES	00000005
510168.14000	4277155.06000	0.03743	60.88	69.00	0.00	ANNUAL	LINES	00000005
510109.73000	4277094.81000	0.03127	60.00	60.00	0.00	ANNUAL	LINES	00000005
510170.34000	4277081.59000	0.03607	60.00	60.00	0.00	ANNUAL	LINES	00000005
510264.36000	4276914.24000	0.03981	60.00	60.00	0.00	ANNUAL	LINES	00000005
510199.10000	4276903.44000	0.03204	60.00	60.00	0.00	ANNUAL	LINES	00000005
510157.61000	4276829.53000	0.02610	60.00	60.00	0.00	ANNUAL	LINES	00000005
510201.26000	4276808.79000	0.02878	60.00	60.00	0.00	ANNUAL	LINES	00000005
510259.18000	4276827.37000	0.03504	60.00	60.00	0.00	ANNUAL	LINES	00000005
510308.02000	4276868.86000	0.04354	60.00	60.00	0.00	ANNUAL	LINES	00000005
510330.92000	4276810.08000	0.04372	60.00	60.00	0.00	ANNUAL	LINES	00000005
510353.40000	4276998.95000	0.05449	63.90	63.90	0.00	ANNUAL	LINES	00000005
510358.58000	4276903.01000	0.05393	60.00	60.00	0.00	ANNUAL	LINES	00000005
510463.34000	4276900.64000	0.07558	63.97	63.97	0.00	ANNUAL	LINES	00000005
510416.09000	4276851.59000	0.06300	60.45	60.45	0.00	ANNUAL	LINES	00000005
510411.30000	4276825.86000	0.06053	60.00	60.00	0.00	ANNUAL	LINES	00000005
510422.67000	4276746.90000	0.05726	60.00	60.00	0.00	ANNUAL	LINES	00000005
510452.36000	4276669.61000	0.05837	60.00	60.00	0.00	ANNUAL	LINES	00000005
510518.97000	4276678.76000	0.08129	60.00	60.00	0.00	ANNUAL	LINES	00000005
510563.21000	4276656.90000	0.09993	60.00	60.00	0.00	ANNUAL	LINES	00000005
510600.33000	4276627.41000	0.11940	59.75	59.75	0.00	ANNUAL	LINES	00000005
510571.86000	4276593.85000	0.09613	59.39	59.39	0.00	ANNUAL	LINES	00000005
510522.02000	4276624.36000	0.07658	59.72	59.72	0.00	ANNUAL	LINES	00000005
510525.92000	4276534.30000	0.07057	58.46	58.46	0.00	ANNUAL	LINES	00000005
510468.25000	4276503.81000	0.05393	58.61	58.61	0.00	ANNUAL	LINES	00000005
510476.70000	4276581.69000	0.05876	59.26	59.26	0.00	ANNUAL	LINES	00000005
510425.26000	4276527.32000	0.04595	59.26	59.26	0.00	ANNUAL	LINES	00000005
510398.44000	4276557.45000	0.04208	59.63	59.63	0.00	ANNUAL	LINES	00000005
510371.12000	4276602.00000	0.03917	60.00	60.00	0.00	ANNUAL	LINES	00000005
510328.51000	4276635.80000	0.03496	60.00	60.00	0.00	ANNUAL	LINES	00000005

510339.90000	4276656.37000	0.03707	60.00	60.00	0.00	ANNUAL	LINES	00000005
510329.33000	4276697.73000	0.03755	60.00	60.00	0.00	ANNUAL	LINES	00000005
511060.04000	4278365.13000	0.08404	60.00	60.00	0.00	ANNUAL	LINES	00000005
511053.55000	4278281.17000	0.09372	60.00	60.00	0.00	ANNUAL	LINES	00000005
511449.69000	4278012.31000	0.08470	60.00	60.00	0.00	ANNUAL	LINES	00000005
511463.60000	4278021.57000	0.08101	60.00	60.00	0.00	ANNUAL	LINES	00000005
511584.50000	4278030.79000	0.06484	60.00	60.00	0.00	ANNUAL	LINES	00000005
511579.17000	4278016.57000	0.06661	60.00	60.00	0.00	ANNUAL	LINES	00000005
511643.38000	4278010.53000	0.06286	60.00	60.00	0.00	ANNUAL	LINES	00000005
511658.54000	4277976.09000	0.06517	60.00	60.00	0.00	ANNUAL	LINES	00000005
511473.56000	4278066.24000	0.07504	60.00	60.00	0.00	ANNUAL	LINES	00000005
510844.05000	4276334.61000	0.67351	48.00	48.00	0.00	ANNUAL	LINES	00000005
510819.00000	4276360.66000	0.52416	48.00	48.00	0.00	ANNUAL	LINES	00000005
510812.25000	4276338.82000	0.43635	48.00	48.00	0.00	ANNUAL	LINES	00000005
510766.27000	4276358.28000	0.28350	48.56	48.56	0.00	ANNUAL	LINES	00000005
510788.08000	4276480.90000	0.52762	49.84	49.84	0.00	ANNUAL	LINES	00000005
510862.95000	4276608.23000	1.65367	51.92	60.00	0.00	ANNUAL	LINES	00000005
510849.39000	4276591.14000	1.35351	52.45	60.00	0.00	ANNUAL	LINES	00000005
510838.19000	4276539.85000	1.18290	51.04	51.04	0.00	ANNUAL	LINES	00000005

** CONCUNIT ug/m^3

** DEPUNIT g/m^2

Appendix D: Noise-Vibration Supporting Information

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Project Number: 3257.0023

Sheet ___ of ___

Project Name: North Entry EIRTest Personnel: Spencer

Noise Measurement Survey

Site Number: ST-1 Date: 5/8/2018 Time: From 12:15 pm To 12:30 p.m

Site Location:

50 feet to center of Spur Ridge Lane, 20 feet from house to the South.Primary Noise Sources: Highway 101 traffic, trucks and construction work to north, ~~bicyclists~~ bicyclists, birds

Measurement Results

	dBA
Leq	<u>46.7</u>
Lmax	<u>63.4</u>
Lmin	<u>37.5</u>
Lpeak	<u>—</u>
L5	<u>51.7</u>
L10	<u>49.7</u>
L50	<u>43.4</u>
L90	<u>40.5</u>
SEL	<u>—</u>

Observed Noise Sources/Events

Time	Noise Source/Event	dBA

Comments: _____

_____Equipment: LXT-1
Settings: A-Weighted ☒ Other ☐ _____Measured Difference: -0.12 dBA
Slow ☐ Fast ☐ Windscreen ☒

Atmospheric Conditions:

Maximum Wind Velocity (mph)	Average Wind Velocity (mph)	Temperature (F)	Relative Humidity (%)	
<u>5.4</u>	<u>1.8</u>	<u>78.1</u>		
Comments: <u>Clear, sunny day</u>				

Project Number: 32570023
Project Name: North Entry EIR
Test Personnel: Spencer

Sheet ___ of ___

Noise Measurement Survey

Site Number: ST-2 Date: 5/8/2018 Time: From 1:03 pm To 1:18 pm

Site Location:

Western boundary of site as shown in KMZ

Primary Noise Sources: Highway 101 traffic noise, birds, wind

Measurement Results

	dBA
Leq	<u>48.3</u>
Lmax	<u>60.1</u>
Lmin	<u>42.4</u>
Lpeak	<u> </u>
L5	<u>51.9</u>
L10	<u>50.8</u>
L50	<u>47.1</u>
L90	<u>44.9</u>
SEL	<u> </u>

Observed Noise Sources/Events

Time	Noise Source/Event	dBA

Comments: _____

Equipment: LXT-1
Settings: A-Weighted ☒ Other ☐ _____

Measured Difference: -0.12 dBA
Slow ☐ Fast ☐ Windscreen ☒

Atmospheric Conditions:

Maximum Wind Velocity (mph)	Average Wind Velocity (mph)	Temperature (F)	Relative Humidity (%)	
<u>6.8</u>	<u>2.0</u>	<u>86.0</u>		
Comments:	<u>Clear, sunny day</u>			

Project Number: 3257.0023Sheet of Project Name: North Entry EIRTest Personnel: Spencer

Noise Measurement Survey

Site Number: ST-3 Date: 5/8/2018 Time: From 1:24 pm To 1:39 pm

Site Location:

Northwest corner of site as shown in KMZPrimary Noise Sources: Highway 101 traffic noise, occasional single engine plane passings, birds

Measurement Results

	dBA
Leq	55.7
Lmax	64.8
Lmin	44.1
Lpeak	—
L5	61.2
L10	60.0
L50	52.7
L90	48.3
SEL	

Observed Noise Sources/Events

Time	Noise Source/Event	dBA

Comments: _____

_____Equipment: LXT-1
Settings: A-Weighted ☒ Other ☐Measured Difference: -0.12 dBA
Slow ☐ Fast ☐ Windscreen ☒

Atmospheric Conditions:

Maximum Wind Velocity (mph)	Average Wind Velocity (mph)	Temperature (F)	Relative Humidity (%)	
4.1	1.7	87.4		
Comments:				

Summary				
Filename	LxT_Data.036			
Serial Number	4397			
Model	SoundTrack LxT®			
Firmware Version	2.301			
User				
Location				
Job Description				
Note				
Measurement Description				
Start	2018/05/08 14:01:00			
Stop	2018/05/10 10:09:45			
Duration	1 Day 20:08:45.5			
Run Time	1 Day 20:08:45.5			
Pause	0:00:00.0			
Pre Calibration	2018/05/08 13:58:36			
Post Calibration	None			
Calibration Deviation	---			
Overall Settings				
RMS Weight	A Weighting			
Peak Weight	A Weighting			
Detector	Slow			
Preamp	PRMLxT2L			
Microphone Correction	Off			
Integration Method	Exponential			
Overload	124.9 dB			
	A	C	Z	
Under Range Peak	81.1	78.1	83.1	
Under Range Limit	27.2	27.2	31.9	
Noise Floor	18.0	18.0	22.7	
Results				
LASeq	53.4 dB			
LASE	105.4 dB			
EAS	3.827 mPa²h			
EAS8	693.480 µPa²h			
EAS40	3.467 mPa²h			
LApeak (max)	2018/05/08 14:01:28	100.4 dB		
LASmax	2018/05/09 2:52:06	78.1 dB		
LASmin	2018/05/10 2:52:22	30.9 dB		
SEA	-99.9 dB			
LAS > 85.0 dB (Exceedence Counts / Duration)	0	0.0 s		
LAS > 115.0 dB (Exceedence Counts / Duration)	0	0.0 s		
LApeak > 135.0 dB (Exceedence Counts / Duration)	0	0.0 s		
LApeak > 137.0 dB (Exceedence Counts / Duration)	0	0.0 s		
LApeak > 140.0 dB (Exceedence Counts / Duration)	0	0.0 s		
Community Noise				
	Ldn	LDay 07:00-22:00	LNight 22:00-07:00	
	58.0	54.5	50.8	
LCSeq	64.9 dB			
LASeq	53.4 dB			
LCSeq - LASeq	11.6 dB			
LAleq	55.2 dB			
LAeq	53.4 dB			
LAleq - LAeq	1.9 dB			
# Overloads	0			
Overload Duration	0.0 s			
Dose Settings				
Dose Name	OSHA-1		OSHA-2	
Exch. Rate	5		5 dB	
Threshold	90		80 dB	
Criterion Level	90		90 dB	
Criterion Duration	8		8 h	
Results				
Dose	-99.9		-99.9 %	
Projected Dose	-99.9		-99.9 %	
TWA (Projected)	-99.9		-99.9 dB	
TWA (t)	-99.9		-99.9 dB	
Lep (t)	60.8		60.8 dB	
Statistics				
LAS5.00	58.4 dB			
LAS10.00	57.0 dB			
LAS33.30	53.4 dB			
LAS50.00	51.3 dB			
LAS75.00	47.1 dB			
LAS90.00	42.8 dB			

TABLE Existing -01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/17/2018

ROADWAY SEGMENT: Healdsburg Avenue - Passalacqua Road to Parkland Farms
Boulevard

NOTES: NEAP - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5900 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.28

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	0.0	87.1	186.3

TABLE Existing -02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/17/2018

ROADWAY SEGMENT: Healdsburg Avenue - Parkland Farms Boulevard to Grove Street

NOTES: NEAP - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7900 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.22

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	0.0	87.8	183.4

TABLE Existing -03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/17/2018
ROADWAY SEGMENT: Healdsburg Avenue - south of Grove Street
NOTES: NEAP - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7000 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.70

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	0.0	81.5	169.4

TABLE Existing -04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/17/2018
ROADWAY SEGMENT: Grove Street - north of Dry Creek Road
NOTES: NEAP - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4400 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.60

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	0.0	58.5	123.8

TABLE Existing -05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/17/2018
ROADWAY SEGMENT: U.S. Route 101 - south of Lytton Springs Road
NOTES: NEAP - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 34000 SPEED (MPH): 65 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 74.25

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
136.6	290.7	624.4	1344.2

TABLE Existing + Project-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/17/2018

ROADWAY SEGMENT: Healdsburg Avenue - Passalacqua Road to Parkland Farms
Boulevard

NOTES: NEAP - Existing + Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 9100 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.16

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	54.8	115.8	248.4

TABLE Existing + Project-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/17/2018

ROADWAY SEGMENT: Healdsburg Avenue - Parkland Farms Boulevard to Grove Street

NOTES: NEAP - Existing + Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11000 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.66

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	0.0	108.0	228.0

TABLE Existing + Project-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/17/2018

ROADWAY SEGMENT: Healdsburg Avenue - south of Grove Street

NOTES: NEAP - Existing + Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7900 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES
DAY NIGHT

	---	-----
AUTOS		
	88.08	9.34
M-TRUCKS		
	1.65	0.19
H-TRUCKS		
	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.22

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	0.0	87.8	183.4

TABLE Existing + Project-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/17/2018

ROADWAY SEGMENT: Grove Street - north of Dry Creek Road

NOTES: NEAP - Existing + Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6500 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES
DAY NIGHT

	---	-----
AUTOS		
	88.08	9.34
M-TRUCKS		
	1.65	0.19
H-TRUCKS		
	0.66	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.30

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	0.0	75.2	160.3

TABLE Existing + Project-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/17/2018

ROADWAY SEGMENT: U.S. Route 101 - south of Lytton Springs Road

NOTES: NEAP - Existing + Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 34000 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES
DAY NIGHT

	---	-----
AUTOS		
	88.08	9.34
M-TRUCKS		
	1.65	0.19
H-TRUCKS		
	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 74.25

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
136.6	290.7	624.4	1344.2

TABLE Future-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/17/2018

ROADWAY SEGMENT: Healdsburg Avenue - Passalacqua Road to Parkland Farms
Boulevard

NOTES: NEAP - Future

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 12100 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.40

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	65.8	139.8	300.3

TABLE Future-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/17/2018

ROADWAY SEGMENT: Healdsburg Avenue - Parkland Farms Boulevard to Grove Street

NOTES: NEAP - Future

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 13800 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	NIGHT -----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.64

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn -----	65 Ldn -----	60 Ldn -----	55 Ldn -----
0.0	61.7	124.7	264.7

TABLE Future-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/17/2018

ROADWAY SEGMENT: Healdsburg Avenue - south of Grove Street

NOTES: NEAP - Future

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 12000 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES
DAY NIGHT

	---	-----
AUTOS		
	88.08	9.34
M-TRUCKS		
	1.65	0.19
H-TRUCKS		
	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.04

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	57.1	114.1	241.4

TABLE Future-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/17/2018
ROADWAY SEGMENT: Grove Street - north of Dry Creek Road
NOTES: NEAP - Future

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8400 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.41

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	0.0	88.9	190.0

TABLE Future-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/17/2018
ROADWAY SEGMENT: U.S. Route 101 - south of Lytton Springs Road
NOTES: NEAP - Future

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 34000 SPEED (MPH): 65 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 74.25

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
136.6	290.7	624.4	1344.2

TABLE Future + Project-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/17/2018

ROADWAY SEGMENT: Healdsburg Avenue - Passalacqua Road to Parkland Farms
Boulevard

NOTES: NEAP - Future + Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 15400 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	NIGHT -----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.45

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn -----	65 Ldn -----	60 Ldn -----	55 Ldn -----
0.0	76.9	164.0	352.6

TABLE Future + Project-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/17/2018

ROADWAY SEGMENT: Healdsburg Avenue - Parkland Farms Boulevard to Grove Street

NOTES: NEAP - Future + Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 16900 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
	---	-----
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.52

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	69.3	142.1	302.7

TABLE Future + Project-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/17/2018

ROADWAY SEGMENT: Healdsburg Avenue - south of Grove Street

NOTES: NEAP - Future + Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 12900 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES
DAY NIGHT

	---	-----
AUTOS		
	88.08	9.34
M-TRUCKS		
	1.65	0.19
H-TRUCKS		
	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.35

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	59.4	119.5	253.2

TABLE Future + Project-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/17/2018

ROADWAY SEGMENT: Grove Street - north of Dry Creek Road

NOTES: NEAP - Future + Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10600 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES
DAY NIGHT

	---	-----
AUTOS		
	88.08	9.34
M-TRUCKS		
	1.65	0.19
H-TRUCKS		
	0.66	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.42

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
0.0	0.0	103.5	221.8

TABLE Future + Project-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 08/17/2018

ROADWAY SEGMENT: U.S. Route 101 - south of Lytton Springs Road

NOTES: NEAP - Future + Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 34000 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES
DAY NIGHT

	---	-----
AUTOS		
	88.08	9.34
M-TRUCKS		
	1.65	0.19
H-TRUCKS		
	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 74.25

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
-----	-----	-----	-----
136.6	290.7	624.4	1344.2

Summary				
Filename	LxT_Data.036			
Serial Number	4397			
Model	SoundTrack LxT®			
Firmware Version	2.301			
User				
Location				
Job Description				
Note				
Measurement Description				
Start	2018/05/08 14:01:00			
Stop	2018/05/10 10:09:45			
Duration	1 Day 20:08:45.5			
Run Time	1 Day 20:08:45.5			
Pause	0:00:00.0			
Pre Calibration	2018/05/08 13:58:36			
Post Calibration	None			
Calibration Deviation	---			
Overall Settings				
RMS Weight	A Weighting			
Peak Weight	A Weighting			
Detector	Slow			
Preamp	PRMLxT2L			
Microphone Correction	Off			
Integration Method	Exponential			
Overload	124.9 dB			
	A	C	Z	
Under Range Peak	81.1	78.1	83.1	
Under Range Limit	27.2	27.2	31.9	
Noise Floor	18.0	18.0	22.7	
Results				
LASeq	53.4 dB			
LASE	105.4 dB			
EAS	3.827 mPa²h			
EAS8	693.480 µPa²h			
EAS40	3.467 mPa²h			
LApeak (max)	2018/05/08 14:01:28	100.4 dB		
LASmax	2018/05/09 2:52:06	78.1 dB		
LASmin	2018/05/10 2:52:22	30.9 dB		
SEA	-99.9 dB			
LAS > 85.0 dB (Exceedence Counts / Duration)	0	0.0 s		
LAS > 115.0 dB (Exceedence Counts / Duration)	0	0.0 s		
LApeak > 135.0 dB (Exceedence Counts / Duration)	0	0.0 s		
LApeak > 137.0 dB (Exceedence Counts / Duration)	0	0.0 s		
LApeak > 140.0 dB (Exceedence Counts / Duration)	0	0.0 s		
Community Noise				
	Ldn	LDay 07:00-22:00	LNight 22:00-07:00	
	58.0	54.5	50.8	
LCSeq	64.9 dB			
LASeq	53.4 dB			
LCSeq - LASeq	11.6 dB			
LAleq	55.2 dB			
LAeq	53.4 dB			
LAleq - LAeq	1.9 dB			
# Overloads	0			
Overload Duration	0.0 s			
Dose Settings				
Dose Name	OSHA-1		OSHA-2	
Exch. Rate	5		5 dB	
Threshold	90		80 dB	
Criterion Level	90		90 dB	
Criterion Duration	8		8 h	
Results				
Dose	-99.9		-99.9 %	
Projected Dose	-99.9		-99.9 %	
TWA (Projected)	-99.9		-99.9 dB	
TWA (t)	-99.9		-99.9 dB	
Lep (t)	60.8		60.8 dB	
Statistics				
LAS5.00	58.4 dB			
LAS10.00	57.0 dB			
LAS33.30	53.4 dB			
LAS50.00	51.3 dB			
LAS75.00	47.1 dB			
LAS90.00	42.8 dB			

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